No. 2885.

United States
Circuit Court of Appeals
Ninth Circuit.

VINEYARD LAND & STOCK COMPANY, A CORPORATION,
Appellant,

vs.

TWIN FALLS SALMON RIVER LAND AND WATER COMPANY, A CORPORATION; AND SALMON RIVER CANAL COMPANY, LIMITED, A CORPORATION,
Appellees.

Brief for Appellant.

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(Figures in parentheses refer to pages of printed transcript.)

STATEMENT OF THE CASE.

This controversy involves conflicting claims of rights to the use of the waters of Salmon River, an interstate stream whose sources are mainly in the State of Nevada, and whose course extends through a portion of the northern part of that state into and through a portion of the State of Idaho, discharging its waters into the Snake River in that state. The suit was brought by the Twin Falls Salmon River Land and Water Company and Salmon River Canal Company, Limited, appellees herein, against the

Vineyard Land and Stock Company, appellant herein, in the United States District Court for the District of Idaho, for the purpose of quieting in plaintiffs the title to the right to use all of the waters of said stream upon lands under their irrigation system in Twin Falls County, Idaho, and to enjoin defendant from the use of any of the waters of said stream upon its lands in Elko County, Nevada. The appellee, Twin Falls Salmon River Land & Water Company, is a corporation organized and existing under the laws of Delaware, and the appellee, Salmon River Canal Company, Limited, is a corporation organized and existing under the laws of the State of Idaho. The appellant is a Utah corporation, engaged in the stock business in the State of Nevada and in connection with that business owns and operates a number of large ranching properties in Elko County, Nevada. Process was served upon the resident agent in Idaho of the defendant. No question is raised as to the jurisdiction of the person of the defendant.

For convenience we shall designate the parties plaintiffs and defendant as they were in the court below.

In their bill (7-34) plaintiffs allege in substance that they are the owners of an extensive irrigation system, including a reservoir with a capacity of approximately 180,000 acre feet, in Twin Falls County, Idaho; that said system was constructed for the purpose of diverting from the channel of Salmon River waters for the irrigation of something like

127,000 acres of land; that their water rights are based upon three permits obtained from the State Engineer of the State of Idaho, by virtue of which they claim to be entitled to the right to use all of the waters of said stream. The particular permit which is relied upon by plaintiffs as giving them rights prior to any of the rights claimed by the defendant, is for 1,500 second feet, and is dated December 29, 1906. Plaintiffs further state that they have completed their system and at the time of the trial, according to the evidence, there were in cultivation and under irrigation under their system approximately 30,000 acres of land.

Plaintiffs also allege that the defendant had commenced and was engaged in constructing canals and ditches in Elko County, Nevada, for the purpose of appropriating, diverting and using the waters of Salmon River and its tributaries, and that the defendant threatens to, and will, unless prevented by the order and decree of court, divert and use said waters and thus prevent the same from reaching plaintiffs' irrigation works; that the plaintiffs were at the time of commencing the action in the use and enjoyment of said waters and were using the entire flow of said stream for the irrigation of the lands under their system. They prayed that the defendant be required to set forth the nature of its demands and claims with respect to said waters; that the right, title and interest of plaintiffs in and to the use of the same be adjudged and decreed to be prior and superior to the rights of the defendant, and that the plaintiffs' said rights be quieted; that the defendant,

its agents, servants, and successors in interest be forever enjoined and restrained from diverting or using any of the waters of said stream.

The defendant filed its answer and counter-claim (34), and besides denying, for lack of knowledge, numerous of the allegations of the bill, specifically denied the priority of any of the rights asserted by plaintiffs in and to the waters of said stream as against the rights of the defendant thereto. In the counter-claim of the defendant (43), it is alleged, among other things, that the defendant is the owner of about 25,000 acres of land, all arid in character, and situated along the course of and within the water sheds of the Salmon River and its tributaries, in Elko County, Nevada, with a small portion along the tributaries of said stream in the State of Idaho; that the statutes and laws of the State of Nevada as they existed at the time of and prior to the appropriations of certain of the waters of said stream by the plaintiffs, provided that all of the natural water courses and natural lakes, and the waters thereof, which are not held in private ownership, belong to the State of Nevada and are subject to appropriation for beneficial uses; that approximately 18,000 acres of the defendant's lands are susceptible of cultivation and irrigation and capable of producing crops of wild and tame grasses; that of this acreage about 13,500 acres are located immediately along and upon said stream and its tributaries in certain designated townships; that since a date long prior to the alleged appropriations of the plaintiffs the defend-

ant and its predecessors in interest had, during the irrigation season of each and every year, appropriated, diverted and used, by means of canals and ditches and by flooding and sub-irrigation, large quantities of the waters of said stream and its tributaries upon said lands, and during the low water season of each and every year had used practically all of said waters for the irrigation thereof. Defendant also alleged that in addition to the 13,500 acres already mentioned, it was the owner of about 4,500 acres of tillable lands located on a somewhat higher elevation than its other irrigated lands and that prior to the date of plaintiffs' appropriations, to-wit, in the years 1892 and 1897, it appropriated 5,000 miner's inches and 200 cubic feet per second, respectively, of the waters of said stream, for the irrigation of said lands; that the predecessors in interest of the defendant, long prior to the appropriations of the plaintiffs, had appropriated, diverted and used all of the waters of said stream necessary for the irrigation of said lands; that notwithstanding the use of said waters by defendant a large portion of the same naturally returned to the channel of said river and flowed thence to the reservoir of the plaintiffs. Defendant also alleged, on information and belief, that the plaintiffs failed to conserve or utilize all of the waters flowing down to the reservoir and on the contrary permitted large volumes to escape therefrom and to waste during all seasons of the year. The defendant prayed that the plaintiffs take nothing by virtue of their bill; also that defendant's rights in

and to the waters of said streams be quieted, and for incidental relief by way of injunction.

Upon the issues so joined the cause was tried to the court and culminated in the decree from which this appeal is taken.

The Court decreed (322-328) that, subject to the rights of defendant as hereinafter stated, plaintiffs had the right to use from the waters of said stream and its tributaries under and by virtue of the three permits issued to plaintiffs by the State Engineer of the State of Idaho, 3,000 cubic feet per second, with the limitation that the maximum aggregate diversion by plaintiffs for any one irrigation season should not exceed 235,000 acre feet; that the said waters were to be used only upon the lands embraced in what is known as the Salmon River Carey Act project; that the defendant was entitled to use annually 12,500 acre feet of said waters, representing and comprising all of its appropriations prior to the year 1907, and prior to the initiation of any rights by plaintiffs. The decree also provides:

1. That said waters should be used by the defendant only upon the lands described in the decree (329-335) and only upon such portions thereof as were reclaimed by the defendant or its predecessors in interest prior to the year 1907.

2. That said waters should be diverted to and upon said lands from the channels of said streams only by means of ditches, canals, or other conduits provided with suitable measuring devices for measuring the amount of water diverted from the channels of said streams.

3. That subject to the plaintiffs' rights, the defendant should be entitled to divert annually and use an additional 12,000 acre feet of the waters of said streams, to date from May 1st, 1911, with the further limitation that water embraced in this right should be diverted from the streams by means of what is known as the High Line or Harrell canal, whose location is particularly described (336) and be used only upon certain lands also specifically described in the decree. (336-37.) At this point it might be well to remark that this right is of no importance whatever to the defendant because there is not sufficient water to satisfy more than a small fractional part of the rights nominally decreed to plaintiffs and made superior to this right of the defendant.

4. Perpetually enjoins the parties from diverting or using any of the said waters in excess of the rights as defined in the decree, and from diverting or using said waters at such time or in such manner as to infringe upon any decreed right of the other party.

5. The decree also provides that the defendant shall install uniform measuring devices at the several points where it diverts water from the channels of said stream and its tributaries in the State of Nevada; that such devices be of such design as to automatically register the amount of water diverted; that such measuring devices and gauges should at all times be subject to the inspection of plaintiffs; that no dam or other obstruction to the natural flow of the streams should be maintained by the defend-

ant so as to divert water from the channels of the streams, except through ditches, canals or other works provided with such measuring devices; that no water should be diverted from said streams by the defendant through any ditch, conduit or other device not provided with measuring apparatus.

6. The Court also decreed that it would retain jurisdiction to make all reasonable rules touching the manner of diverting, measuring and distributing the waters and the devices to be installed for such purpose; also for the purpose of directing that the parties keep accurate and detailed records of the amounts of water diverted and to require reports thereof to be filed from time to time, and for the purpose of appointing commissioners or water masters to make distribution in accordance with the terms of the decree, and to punish the parties, their officers, agents, employes, and their grantees and successors in interest, for any violation of the decree.

General Statement of the Questions Involved in this Appeal.

The questions involved in this appeal are presented in detail by the Assignments of Errors, hereinafter set forth, but in more simple and direct form may be summarized as follows:

1. The trial court was in error in finding that the defendant was entitled to the right to use only 12,500 acre feet per annum of the waters in controversy; that on the contrary the Court should have found that the defendant had a vested right, prior to any right of plaintiffs, to use for irrigation purposes at least 50,641.5 acre feet per annum of said

waters; that in determining the quantity of water to which the defendant was entitled, the Court erroneously excluded large areas of land that had been irrigated by the predecessors in interest of the defendant long prior to the initiation of any water rights on the part of plaintiffs and particularly excluded all of the lands belonging to the defendant, amounting to about 4,500 acres, lying under and susceptible of irrigation from the High Line canal; that the Court also erroneously found and determined the duty of water for defendant's lands to be much higher than the facts and evidence introduced in the case would warrant.

2. The Court awarded to the plaintiffs the right to use of the waters in question a quantity greatly in excess of that which the evidence showed the plaintiffs had applied to beneficial uses and purposes, and recognized the right of plaintiffs to irrigate a much larger area than the evidence justified.

3. The Court erroneously attempts by its decree to exercise jurisdiction over defendant's property and property rights in the State of Nevada, beyond the territorial jurisdiction of the court, and erroneously attempts to regulate and control the defendant's management, use, occupation and control of its property and property rights in the State of Nevada, and attempts to compel defendant, with respect to its said property, to forego the exercise of rights that are expressly conferred upon it by the laws of the State of Nevada.

4. The trial Court erroneously found and de-

cided that defendant's right to the use of waters for the irrigation of lands lying under, and susceptible of irrigation from, its High Line Canal, is subsequent and subject to the rights decreed to plaintiffs; that in this connection the Court erred in refusing to give proper legal effect to certain notices of location and appropriation relating to said High Line Canal and offered in evidence, but received and considered by the Court under limitations and restrictions wholly inconsistent with the true legal effect of such notices.

5. Question is also raised with respect to the refusal of the Court to receive and consider certain material testimony offered by the appellant.

Specification of the Errors Relied Upon and in Which the Decree is Alleged to be Erroneous.

The assignments of errors relied upon and in which the decree is alleged to be erroneous, are as follows:

I.

"The Court erred in making and entering its decree herein awarding and decreeing to defendant as a prior right to the rights of the plaintiffs in and to the waters of Salmon River and its tributaries, only 12,500 acre feet of said waters, and in not finding and holding that defendant is entitled to the prior right to the use of 50,641.5 acre feet of the waters of said streams. (341.)

II.

"The Court erred in decreeing that the right of defendant to use 12,000 acre feet of the waters

of said Salmon River and its tributaries for the irrigation of its lands by means of defendant's High Line, or Harrell, Canal, is subsequent and subordinate to plaintiffs' rights to use the waters of said streams. The lands of defendant referred to in this assignment are situate in Elko County, State of Nevada, and are particularly described as follows, to-wit:

(Here follows a specific description of the lands mentioned in this assignment, the area of which is approximately 5300 acres.) (341-343.)

III.

"The Court erred in decreeing absolutely to plaintiffs any of the waters of Salmon River and its tributaries in excess of the quantity, to-wit, about 45,000 acre feet, which has been used by plaintiffs for beneficial purposes, and in enjoining the defendant from using any of such excess waters prior to the actual application of the same to the beneficial uses for which said waters are claimed, and in making and entering any decree herein with respect to such excess, except to determine the amount thereof that can be diverted through plaintiffs' works and the priority of the same, and to set a time within which such amount of such excess shall, subject to the rights of the defendant, be applied by plaintiffs to the purposes for which the same is claimed. (343.)

IV.

"The Court erred in making and entering its

decree herein in quieting title in plaintiffs to any of the waters of Salmon River and its tributaries. (343-344.)

V.

"The Court erred in decreeing that the 12,500 acre feet of the waters of said Salmon River and its tributaries awarded to defendant as a prior right to the rights decreed to plaintiffs, can be used only upon such of the defendant's lands in the State of Nevada, and particularly described in the decree herein, as were reclaimed by defendant and its predecessors in interest prior to the year 1907. (344.)

VI.

"The Court erred in making and entering its decree herein enjoining the defendant from using any part of said 12,500 acre feet of the waters of said Salmon River and its tributaries so decreed to defendant as a prior right, upon the lands of defendant located under the High Line, or Harrell, Canal, and particularly described in Assignment numbered II. (344.)

VII.

"The Court erred in making and entering its decree herein enjoining the defendant from changing the points of diversion and places of use of the waters of said Salmon River and its tributaries, as authorized by law and particularly as authorized by the laws of the State of Nevada. (344.)

VIII.

"The Court erred in making and entering its decree herein enjoining the defendant from irrigating its lands by means of dams placed in the natural channels of said Salmon River and its tributaries and in the sloughs and other channels leading therefrom, thereby flooding said lands without the use of artificial canals, ditches and conduits, and in enjoining the defendant from diverting any of the waters of said stream or its tributaries, except by means of ditches or other devices provided with automatic guages. (344-345.)

IX.

"The Court erred in making and entering its decree herein requiring the defendant to install in all of its ditches, canals and conduits, in the State of Nevada, automatic measuring devices for measuring all waters used by the defendant from said streams, in said state, and in decreeing that all such measuring devices and guages shall at all times be subject to the inspection of plaintiffs; and in decreeing that the plaintiffs should have the right to go upon the lands of the defendant in the State of Nevada for the purpose of inspecting the measuring devices installed by defendant in its said ditches, canals and conduits. (345.)

X.

"The Court erred in making and entering its decree herein awarding to and quieting title in

plaintiffs to the right to use each season 235,000 acre feet of the waters of said Salmon River and its tributaries, and in awarding and decreeing to plaintiffs any quantity of said waters in excess of 45,000 acre feet, and in decreeing that any right of plaintiffs to the use of said waters is prior to any right of the defendant thereto. (345-346.)

XI.

"The Court erred in making and entering its decree herein retaining jurisdiction in said cause for the purpose of making rules touching the manner of defendant's diversions, measurements, and distribution of the waters of said Salmon River and its tributaries in the State of Nevada; or for the purpose of directing defendant to keep records of the amounts of water of said streams diverted and used by it in the State of Nevada; or for the purpose of appointing water-masters or commissioners with authority to go upon the said premises of the defendant in the State of Nevada and to distribute to the defendant the waters of said streams to which it is entitled for the irrigation of its lands in said state; or for the purpose of making any order whatever touching the distribution, use, points of diversion or places of use of the waters of said streams by the defendant in connection with the irrigation of its lands in the State of Nevada. (346.)

XII.

"The Court erred in making and entering its decree herein in awarding to the plaintiffs any of the waters of the tributaries of Salmon River known as Jake's Creek, Dry Creek and Nall Creek, and in not finding and holding that defendant is entitled to the use of all of the waters of said streams. (346.)

XIII.

"The Court erred in decreeing that the defendant is not entitled to irrigate the following described lands belonging to defendant, in Elko County, State of Nevada, and in Twin Falls County, State of Idaho, and in refusing to award to defendant 7,438 acre feet of the waters of said Salmon River and its tributaries for the irrigation of said lands. Said lands have a total area of 1,653 acres, and are particularly described as follows, to-wit:

(Here follows a specific description of the lands mentioned in this assignment.) (347-351.)

XIV.

"The Court erred in making and entering its decree herein in refusing to award to the defendant the right to use all of the waters of the tributary of said Salmon River known as Trout Creek, after the flow of said tributary ceases each season to reach the natural channel of said Salmon River, and in enjoining the defendant from the use of any of the waters of said tributary upon lands formerly

irrigated by the defendant from the waters thereof." (351.)

BRIEF OF THE ARGUMENT.

I.

The Court erred in awarding to the defendant, as a prior right, only 12,500 acre feet of the waters in question, instead of finding and deciding that the defendant is entitled to the right to use, as a prior right, 50,641.5 acre feet of said waters.

This proposition involves and includes the first, twelfth, thirteenth and fourteenth assignments of error. The decree does not specifically find or decide what particular lands the defendant is entitled to irrigate with the waters to which defendant is awarded a prior right. However, lands aggregating approximately 11,660 acres are specifically mentioned in the decree as being the lands that include those upon which the waters awarded to defendant as a prior right were used prior to 1907. We think the evidence quite conclusively shows that the defendant had under cultivation and irrigation, prior to 1907, not less than 8,506.4 acres of the lands described under paragraph "b" of the decree (329-335) and that prior to said date it also had under cultivation and irrigation the lands, aggregating 1,653 acres, described in the thirteenth assignment of error. (347-351.) In addition to these lands the defendant also contends that it was entitled to a prior right to sufficient water to irrigate approximately 4,500 acres of lands lying under, and susceptible of irrigation from, its High Line Canal. The evidence introduced by the

defendant with respect to the irrigation of its lands consists of the testimony of certain witnesses, supplemented by carefully prepared maps which were introduced as exhibits in the case, which maps, on account of their large size, could not be incorporated in the printed transcript and for that reason have been, pursuant to order of court, transmitted to and deposited with the Clerk of this Court. In considering the question of acreage of irrigated lands, therefore, it will be necessary for the Court to refer to these exhibits in connection with the testimony appearing in the transcript. It will be noted that the defendant's lands are, in the main, located upon and along Salmon River and its tributaries in the northern part of the State of Nevada and up-stream from the point where Salmon River crosses the Nevada-Idaho state line. Plaintiffs' dam is approximately fifteen miles below the State line. Defendant's properties consist of a number of ranches with local names, and also several unnamed fields and pastures on the head-waters of some of the tributaries. The Hubbard ranch is the one highest up the stream and is located on the tributary known as Jake's creek. The next ranch below this is the Vineyard ranch. It is located near the point where Jake's creek empties into the main stream. These two ranches are shown on defendant's Exhibit No. 11. The Vineyard ranch is also shown on defendant's Exhibit No. 4. The San Jacinto is the largest of the ranches. It extends along the stream below the Vineyard ranch for a distance of about twelve miles and is shown on

defendant's Exhibit No. 12. The Bridge ranch is shown on defendant's Exhibit No. 13 and is located on Shoshone creek, a short distance above where that tributary flows into Salmon River, near the Nevada-Idaho state line. The unnamed irrigated pastures and fields are shown on the following exhibits: Defendant's Exhibit No. 7, a plat of the irrigated lands on Trout Creek; No. 14, a plat of the Nall Creek fields and No. 15, a plat of the irrigated lands in Shoshone basin, on Jake's Creek and on Hot Creek. These streams are all tributaries of Salmon River.

It is conceded that plaintiffs' rights were initiated when their first application for appropriation of water was filed with the State Engineer of Idaho. This was on the 29th day of December, 1906. It must also be conceded that the defendant is entitled to a priority for all water rights established or initiated by it or its predecessors in interest prior to that date. On the trial of the case the defendant established the extent of its appropriations prior to the year 1907. In doing this it was confronted with many difficulties. The plaintiffs, in their bill, claimed all of the waters of Salmon River and its tributaries; whereas, in fairness and justice, they should have conceded the seniority of defendant's rights in so far at least as those rights were not disputable. It was very difficult indeed for the defendant to locate the whereabouts and procure the attendance of the witnesses who knew the facts concerning the irrigation of its lands. The defendant purchased the property in the fall of 1908. Prior to that time it had been owned and operated by different persons and companies ex-

tending over a period of from thirty to thirty-five years. The methods of irrigation had been of the crude character generally employed on western ranches. The work was done by ranch hands, some of whom had died; others were scattered throughout different parts of the United States. The former owners of the property, as the record shows, were deceased. The defendant did, nevertheless, procure the attendance of nearly every living witness who was acquainted with the irrigation on these various ranches and their testimony stands practically uncontradicted. The only evidence that there is in the record that can be said to be in conflict with the testimony of these witnesses is the testimony of two of plaintiffs' witnesses, Mr. Stocking (96), and Mr. Darlington (64). These two witnesses made cursory investigations a short time before this suit was commenced, for the purpose of testifying as to the acreage under irrigation, but their opportunities for observation were so meager and the conclusions reached by them as to the irrigated areas so unsatisfactory, that the Court must have disregarded their testimony; at any rate there is no finding of the Court that appears to rest to any extent whatever on the testimony of these witnesses.

Mr. E. C. McClellan (100) was the first witness called by the defendant to testify concerning the irrigation of its lands during the period from 1880 to 1904. He is an engineer of long experience and was intimately acquainted with that section of the country, having selected and surveyed the lands in ques-

tion for the defendant's predecessors and also having laid out practically all of the ditches thereon for them. As shown by his testimony, he was possessed of a rare faculty for accurate observation and had a most retentive memory. He had kept a record of his several surveys and on the trial was able to substantiate his statements from entries in field books made on the ground at the time of making the surveys. It appears that he was not upon these properties to speak of after 1904. He testified that in 1889, for the purpose of ascertaining the particular lands that were then being irrigated, he made a survey of the Vineyard ranch and of the valley between the Bird's Nest and the Bore's Nest, known as the San Jacinto ranch. From his notes of these surveys he produced defendant's Exhibit No. 4, being a map of the lands under irrigation on the Vineyard ranch in 1889 and prior thereto. In the same way he produced defendant's Exhibit No. 5, being a plat of that part of defendant's property located between the Bird's Nest and the Bore's Nest, a distance of about twelve and a half miles, and now known as the San Jacinto ranch. (104.) He gave minute descriptions of the various ditches that existed upon the lands in those days. These ditches appear on the exhibits and the irrigated areas are shown by the shaded portions of the exhibits. For instance, on Exhibit No. 4, as explained by the witness, the shaded portion lying south of what is labelled "Harrell Ditch" includes the area that was under irrigation on the Vineyard ranch. (103.) This area embraced 928.8 acres. (104.) The plaintiffs contended that only a portion

of that area was under irrigation until the upper Vineyard or Tunnel ditch, was constructed, some time subsequent to 1907, but it was shown that this ditch covered only about 100 acres more land than was irrigated by the ditches that existed prior to its construction, and the Court evidently found in favor of the defendant on this issue, because it included in the decree all of the lands on the Vineyard ranch claimed by the defendant to have been irrigated prior to 1907. We take it for granted, therefore, that appellees will concede that the appellant is entitled to a prior right to the use of sufficient water to irrigate 814.4 acres on the Vineyard ranch.

Passing to a consideration of the evidence concerning the San Jacinto ranch, it will be seen, as already stated, that Mr. McClellan surveyed the irrigated lands on this ranch in the same year (1889). From his notes he produced defendant's Exhibit No. 5, and located thereon, in dark colors, the lands that were irrigated prior to 1889, as well as all ditches that up to that time had been constructed for irrigation purposes. According to his testimony the irrigated area prior to 1889 on that ranch comprised 4,178.4 acres. (105.) It will be seen from Exhibit No. 5, as explained by the testimony, that these lands lie along the channel of the stream, at but a slight elevation above it, and extend to a distance on an average of about half a mile to a mile on each side thereof. The valley is typical of the mountain valleys of that section of the country. These lands on either side of the main channel were covered with natural meadows and pastures and are intersected by

sloughs and channels formed by the natural action of the water during the season of high water. Mr. McClellan explained the general method of irrigating these lands in those days. It was the usual method of irrigating natural meadows and pastures under the conditions described. No attempt was made to create a scientific irrigation system; diversions were made from the sloughs and natural channels at convenient places and the water was caused to spread out over the intervening lands. For the higher lands along the outer margin of the basin ditches were constructed, and thus the entire area of these bottom lands was irrigated and caused to produce crops of natural hay, some of which was harvested and portions of which were used as pasturage for the numerous cattle that were kept on these and adjacent lands by the then owners of these ranches. The testimony on this subject is tersely, but comprehensively, stated in the record. (102-108.) The Court in its decree excluded numerous of the irrigated tracts on the San Jacinto ranch. We are unable to explain why this was done, unless it was by inadvertence or mistake. The testimony as to the irrigation of that part which was excluded was of the same identical character as that with reference to the part that was included in the Court's decree. These excluded lands at San Jacinto are specifically described, and the areas of the different tracts stated, in the thirteenth assignment of error. (347-48-49.) The total area of those lands on the San Jacinto ranch alone, is 652.30 acres. The remainder of the irrigated lands that were excluded, going to make up the 1,653

acres mentioned in the thirteenth assignment, is located at other places, as will be explained later on in this brief. It is extremely important to the appellant to have the decree modified so as to include the irrigated lands excluded from the decree, because in addition to the property value involved it is very difficult if not impossible in many instances to irrigate the lands included in the decree without irrigating the excluded lands also.

After the year 1889 and between that date and the year 1904, the irrigated area on the San Jacinto ranch was increased to the extent of about 1,000 acres. (221-222.) Activities along the line of additional ditch construction seem to have been greatly stimulated by the hard winter of 1889-1890, when the then owners of these ranches suffered very heavy losses of cattle by starvation. Mr. McClellan was employed by the Sparks-Harrell Company, the then owner, to lay out ditches for the purpose of bringing additional lands under irrigation, and also for the purpose of irrigating more conveniently and thoroughly the lands that were already being irrigated. He commenced this work in 1893 and continued from year to year until sometime in 1904. (102.) He made careful notes of the ditches that were laid out by him and afterwards constructed, as well as of the additional lands brought under irrigation, and from these notes, as well as from independent recollection, he produced defendant's Exhibit No. 6. It will very greatly extend the length of this brief, without serving any very useful purpose, to here state Mr. Mc-

Clellan's testimony concerning this additional ditch construction. Suffice to say that he gave a detailed description of each one of the ditches, including the point of diversion, the approximate size, the course and length of each ditch. Inasmuch as these ditches were in existence at the time of the trial, there was no room for controversy concerning them. Should the Court desire at this point, however, to refer to this testimony it will be found at pages 109 to 117 of the transcript. By the year 1904, therefore, there was under irrigation on the San Jacinto ranch approximately 5198.8 acres. This additional 1,000 acres is shown in detail on defendant's Exhibit No. 16, and also on a map made by Mr. McClellan and introduced as plaintiff's Exhibit No. 32. By means of ditches constructed prior to 1904, supplemented by the dams placed in the channel of the river and in sloughs extending therefrom, all of the lands lying between the ditches and the channel of the stream from the Bird's Nest to the Bore's Nest were irrigated. Mr. McClellan also made ditch locations on the Bridge ranch and in the various fields located along the tributaries of Salmon River, but was not able to plat the irrigated lands at these places because of not having surveyed the same with sufficient accuracy.

The defendant in 1914 employed a force of engineers for a period of about eight months, who during that period surveyed and platted all of defendant's irrigated lands adjacent to Salmon River and its tributaries. These surveys were made with great

fidelity and attention to detail. The irrigated lands were classified according to the character of the crops grown thereon and different colors were employed to distinguish the various classifications. Every distinct tract, however small, possessing definite characteristics as to the kind of crop grown thereon, was surveyed and platted separately with the utmost precision. The exact location of every ditch, slough or other water channel was determined by surveys and then platted according to the adopted scale. The testimony shows that the surveys were made during the irrigation season while the water was either flowing over the ground from the ditches, sloughs or other water channels, or at a time so shortly thereafter as to enable the surveyors to ascertain without difficulty just what lands were under irrigation. (241.) These cultural maps and the testimony of the witnesses who made the surveys, constitute most satisfactory evidence as to the extent of irrigation by the defendant, even although the surveys were not made until 1914, for the reason that, with two exceptions (the Tunnel ditch on the Vineyard ranch and part of the High Line Canal at San Jacinto) the ditches as they existed on these lands in 1914 were the same ditches that were there as early as 1904. The lands under these ditches, shown by the cultural maps as being irrigated in 1914, were unquestionably under irrigation as early as 1904, because they consisted of native meadows, more or less level, and easily flooded. These cultural maps comprise defendant's Exhibits No. 7, No. 11, No. 12, No. 13, No. 14 and No. 15. Ex-

hibits numbered 11 and 12 cover the Vineyard and San Jacinto ranches and are corroborative in every detail of the testimony of Mr. McClellan and are in harmony with defendant's Exhibits numbered 4, 5 and 6 (heretofore referred to) produced by Mr. McClellan from surveys and observations made by him prior to 1904. To ascertain the acreage of the irrigated lands on Nall Creek, Upper Trout Creek, Big Creek, Hot Creek, Shoshone Basin and on the Hubbard ranch, it is necessary to consider the testimony of Robert W. Anderson (146-150), L. A. Nelson (153-155), George R. Bolding (157-158), W. G. Greathouse (176-178), James B. Steele (183-184), Henry Harris (218-220), and T. R. Beason, (211-215), in connection with the cultural maps marked defendant's Exhibit No. 7 (Trout Creek), No. 11 (Hubbard Ranch), No. 13 (Bridge Ranch), No. 14 (Nall Creek), and No. 15 (Shoshone Basin, Big Creek and Hot Creek). It appears conclusively from the testimony of these witnesses that the irrigation at these various fields was accomplished by means of ditches that were constructed prior to 1904. Indeed, there was no evidence introduced or offered by plaintiffs with reference to the irrigation of these fields. So far as we know it is not contended by plaintiffs that there has been any new ditch construction at any of these places. The acreage at these places, as shown by the evidence referred to is, at Nall Creek, 157.7 acres; Hubbard Ranch, 700.7 acres; Upper Trout Creek, 132.8 acres; Big Creek, 207 acres; Shoshone Basin, 834.7 acres; Hot Creek, 315.2 acres (269.2 acres

in Nevada and 46 acres in Idaho) ; Bridge Ranch, 405 acres; a total of 2753.1 acres. This total added to the 928.8 acres of irrigated lands on the Vineyard Ranch and 5198.8 acres on the San Jacinto Ranch comprises the total irrigated acreage on the defendant's lands, with the exception of the lands hereafter to be considered lying under and susceptible of irrigation from that part of the High Line Canal lying north of the San Jacinto Lane. From this total there should be deducted 130 acres for the channel of the stream, (222) which would leave 8880.7 acres. This includes 132.8 acres of irrigated lands on Trout Creek, 105 acres of irrigated lands on the Hubbard Ranch, 137.8 acres of irrigated lands on the Bridge Ranch, 145.7 acres of irrigated lands on Nall Creek, 269.20 acres on Hot Creek in Nevada and 46 acres on Hot Creek in Idaho, that were omitted from the lands described in the decree. This omitted acreage, added to the 752.80 acres omitted in the decree from the irrigated area on the San Jacinto and Vineyard ranches, makes up the total acreage of irrigated lands erroneously excluded in the decree and mentioned in the thirteenth assignment of error.

Some of the omissions seem to have occurred through inadvertence in drafting the decree. For instance, all of the lands on Upper Trout Creek are omitted entirely from the decree, but similarly numbered sections in another township, remote from any of the streams in question, are included in the decree. In fact there is something over 3,000 acres of unirrigated lands described in the decree. What-

ever may be the explanation for the exclusion of irrigated lands and inclusion of lands not susceptible of irrigation, we can think of no possible theory upon which the same can be justified by any evidence adduced on the trial. Defendant's rights in connection with these omitted lands are among the oldest and best established of its water rights in that section of the country.

The status of appellant's rights with reference to the lands under the High Line Canal requires somewhat extended consideration, and before taking up that subject we will conclude the argument with respect to the *quantity* of water that the defendant is entitled to for the 8750.7 acres above mentioned.

DUTY OF WATER.

It will be observed that the 12,500 acre feet found by the Court to be the extent of defendant's prior rights in and to the waters in question, is at the rate of approximately 1½ acre feet per acre; whereas, under the evidence, there would be required for the proper irrigation of these lands not less than 4½ acre feet per acre. The evidence showed without contradiction that the system of irrigation employed from the beginning by the predecessors of defendant was one which required a much larger quantity of water per acre than is required upon lands under intensive cultivation and where the crops are of sufficient value to justify the adoption of the most economical methods of irrigation, however expensive they may be. On these ranch lands the hay and grass

produced was at best very limited in quantity and of rather a poor quality. There was, of course, no market for such crops and the only use to which they could be put was that of furnishing hay and pasturage for range cattle. As shown by the uncontradicted testimony of the witnesses for the defendant, it has always been and is the practice to irrigate such lands by the flooding system. As a consequence of this, crops of a peculiar character that have adapted themselves to such methods of irrigation, have become established. They are shallow-rooted crops and require almost constant application of water to keep them green and in a growing condition. (141-42.) It seemed to be the idea of the learned trial court that such a use of water, however necessary it might be for that class of crops, did not constitute a beneficial use; that it would be incumbent upon appellant to change the character of its crops from those that require this large quantity of water to a kind that could be grown with a much smaller quantity. We think this conclusion involves a fundamental error. It must be that the expediency of producing one kind of crop or another is a question that rests in the sole discretion of the owner of the land. These waters had been used in this particular way without let or hindrance from the very beginning of development in that section of the country. It will be admitted that the defendant's irrigated lands are located along the streams from which they are irrigated and are but slightly higher than the streams themselves. They would be practically level except for the swales

and sloughs that have been washed through them by the high water. The only practical method of irrigation is by flooding. The flow of the streams from which the water is obtained is variable in amount, gradually increasing in the early season until about the middle of June, and rapidly decreasing thereafter. The growing season is short and it is necessary to produce a rapid growth of grass while the water is plentiful. Thus it has become customary to flood the lands continuously from about April 1st until about the 20th of July. As suggested, the plant life on these lands has become adapted to those conditions. According to Mr. McClellan, whose experience in the irrigation of such lands has extended over a period of more than twenty-five years, it is absolutely necessary to flood the lands (119); that if such crops were not irrigated in that way there would be little or no grass grown (141); that it would ripen immediately and stop growing inside of a week or less (141); that rye grass will grow a little longer because the live roots extend a little deeper in the soil, but the roots of the other grasses are within a quarter of an inch of the surface; that even if rye grass has been irrigated for a few years by continuous flooding all of the deeper roots die, leaving only the surface roots, and as soon as the water is taken off the ground dries on the surface and there is no moisture for the roots and the growth stops (142); that the flooding method is carried on almost entirely on the stock ranches in Nevada and the crops are used for hay and pasturage (104, 138); that during

all of the time of his experience in connection with these lands the water was taken out through the various ditches up to their full capacity and used on the land. (143.)

Robert W. Anderson, another witness for the defendant, who had charge of the Hubbard Ranch for a few years, testified that the practice was to turn out all the water he could get from the creek; that he and others had followed the same practice for over thirty years (149); that he has been in the ranching business himself for seventeen or eighteen years at different places in Nevada and that the practice had always been to turn out all the water he could get on to the land and leave it there; that if he did not do so there would be no hay (149); that if the water was taken off a week or ten days before haying time the hay gets dry and is hard to stack (149); that on all of the other ranches with which he was familiar the irrigation was of the same character. (149-150.)

L. A. Nelson testified that the practice of flooding the lands was always followed while he was on these ranches between 1880 and 1892. (153-54.)

George R. Bolding testified that he had been acquainted with that part of the country for twelve or fourteen years and the flooding method, as employed in connection with the defendant's lands, was followed by the O'Neills and the Heslers on their lands higher up the river (158); that he did not know of any other character of irrigation on wild grass lands in Nevada. (158.)

W. G. Greathouse testified that it was necessary

in that section of the country to flood the lands in order to produce crops (180); that that is so even on meadow lands where it is too wet to raise sage brush (180); that prior to going to Elko he irrigated about 1,000 acres in Ruby Valley for three years and the irrigation was all done by flooding the land. (178.)

The testimony of these witnesses was not contradicted in any particular. Indeed, no attempt was made by the plaintiffs to prove that any other or different method of irrigation would suffice. No one at all familiar with the subject would even suggest that irrigation of that character could take place with less than 4½ acre feet per acre, but in order to furnish the Court with a more definite estimate of the duty of water for such irrigation, the defendant called Don H. Bark (166-176), who possessed, as the record shows, very unusual qualifications as an irrigation expert. He was an engineer in the service of the United States Department of Agriculture and had been carrying out water investigations in Idaho for more than six years. Some of the investigations were conducted at places not far distant from the defendant's lands. There were something like 200 experiments, involving 600 five acre fields. Mr. Bark was familiar with the literature on the subject of irrigation, including reports published in foreign languages. He explained that the general object of his investigations was to conserve the use of water. (168.) If he had any mental bias, therefore, it would clearly be in the direction of an economic use of water. He had not personally investigated the irrigation of

such crops as those of the defendant and so far as he knew no one else had done so, but he had nevertheless made extensive investigations as to the use of water upon upland pastures, and we think it will be admitted that the irrigation of defendant's lands would require at least as much water as the irrigation of the upland pastures to which Mr. Bark referred. He said:

> "In stating the ratio or relation, if any, that exists between the amount of water used on pasture lands and the amount of crops produced, I would say that up to a certain point the more water the more pasture. It doesn't differ materially from alfalfa, but it does differ very materially from potatoes and orchards and grain. You can very easily apply too much water to grains so that you will absolutely decrease the yield. In some cases where you apply three feet deep to grains you might raise less crop than if you didn't put any water on at all, but that isn't true of pasture. Up to a certain point the more water the more pasture, and it will require fully twice as much as for grains. I don't think I ever found the point in the pasture lands after which the application of more water would result in no increase, or an actual decrease, of the crop, because we never put water enough on. We have put about four and a half acre feet on upland pastures and we still got more pasture. Up to four or four

and a half acre feet on an average soil, I would state without qualification that the more water used the more crop would be produced. Whatever qualification there is will be based on something other than my actual experiments." (168-169.)

Mr. Bark also testified that the quantity of water needed for a given project would depend upon the economic conditions surrounding such project, saying:

"To illustrate: Five tons of alfalfa per acre might be produced with two and a half acre feet of water, if your land was very carefully prepared and you gave considerable attention to the irrigation. But if that alfalfa was only worth $3.50 a ton the farmer might go broke if he could only have, say, two acre feet per acre for that alfalfa. But if he could get $10.00 a ton for that alfalfa he could afford to put the expense into the levelling and into the attention to the water, to make the water go just as far as it possibly could. The same thing will hold true with grains or with orchards. In other words, a man can afford to pump water to extreme heights on orchards if he is getting a good price for his fruit, but he couldn't afford to pump and give lots of attention to his water on pasture ground that was far removed from a railroad." (170.)

No evidence was offered by plaintiffs in rebuttal of this testimony, and there is nothing in the record that tends to rebut it.

Joseph Jenson (200), an irrigation expert of great learning and experience, testified that he had visited the San Jacinto ranch in November of 1913 and made careful observations of the conditions respecting irrigation. He said (205) that the water table in the fall of the year when he was there was within about two feet of the surface of the land; that the soil was alkali and wherever that is so the flooding of the land is necessary, otherwise the alkali rises to the surface and kills any kind of vegetation growing upon that class of land. He said that he knew of no method of irrigation for such lands and for the production of such crops as were grown there except the flooding system. It is respectfully submitted that the testimony of these witnesses is more than sufficient to establish the fact that irrigation by flooding on those particular lands is more beneficial than any other system would be. The record shows that those lands are used principally as a pasture during the fall and winter for the large numbers of stock that range in the adjacent mountains during the summer time. All of the grass produced, whether on the meadows or intermingled with brush and willows, is available and valuable as forage. By what right, we ask, can it be said that appellant must use its lands in some other way so that appellees might perchance have their water supply increased?

Assuming that irrigation by flooding is reason-

ably necessary, it remains for us to estimate as best we can the quantity of water that would thereby be applied to these lands. It is obvious that there is a substantial quantity of water used in connection with that character of irrigation that in the very nature of the case is not measurable. None of the water that is diverted directly onto the lands by means of dams in the river and in the sloughs and other channels, without ditches, can be measured. It appears from the evidence that few if any experiments have ever been carried on for the purpose of determining the duty of water under these conditions. It cannot be denied at any rate that such irrigation requires a vastly greater quantity of water per acre than is required for upland pastures such as were mentioned in the testimony of Mr. Bark, where the irrigation would take place at more or less frequent intervals, with intermissions of considerable periods of time when there would be no water flowing upon the land. As we have already noticed, Mr. Bark concluded, after summarizing generally the results of numerous experiments he had been conducting, that he had seen at least 4½ acre feet used on upland pastures and up to that amount the more water that was applied the better was the pasture (169). Since the trial of this case Mr. Bark's investigations have been published by the United States Department of Agriculture, Bulletin No. 339. While this document was, of course, not introduced as evidence in the case, it contains conclusions of a sufficiently scientific character as, perhaps, to jus-

tify reference to it at this point. In Table No. 3, at page 11, there is a tabulation of the effects of different quantities of water on alfalfa, clover and pasture during the season of 1910. On very gravelly soil (similar to the lands in question) the application of 6.352 acre feet resulted in a crop of alfalfa of 3.78 tons per acre. With 9.401 acre feet the same character of land produced 5.20 tons of alfalfa per acre. The experiment with red clover shows that with 6.92 acre feet per acre 3.78 tons were produced, but with 12.98 acre feet per acre 4.60 tons were produced. In Table No. 18, at page 35, it is demonstrated that not less than 6.43 acre feet per acre is needed for the irrigation of alfalfa on porous soils at elevations of from 2,600 to 5,800 feet. In Table No. 23, page 46, it is shown that the average quantity of water diverted for each acre irrigated under ten different canals during the season is 5.39 acre feet. The author says that this large use of water is somewhat wasteful, due to loss from the canals and in other ways that could be avoided. But it must be borne in mind that this use of water is at places where intensive irrigation of the more valuable crops is being carried on. Considering the character of irrigation that is necessary on defendant's lands, and the kind of crops that are grown there, defendant's claim for four and a half acre feet per acre is certainly not extravagant. It is equally clear that four and a half acre feet per acre is but a small fractional part of the quantity of water that has actually been used in the past for the irrigation of these lands. No

one can doubt that the constant flooding of lands during the irrigation season would require vastly more water than that which was used in any of the experiments conducted by Mr. Bark, or that were used in the farming communities to which he refers. We also call attention to Bulletin No. 172, published by the U. S. Department of Agriculture in 1906. At page 83 there is a table giving a summary of the duty of water measurements in three counties in the State of Montana. The average for the sixteen canals included in the investigations is 4.10 acre feet per acre. The author shows that water has been decreed by the courts in that state on about that basis.

Four and a half acre feet per acre for 8750.7 acres equals 36,760.5 acre feet.

The approximate quantity of water used for irrigation on these lands may be arrived at in another way. Mr. L. W. Beason, an engineer, (189) measured the capacities of sixteen of the ditches and found that they had a total capacity of 362.8 second feet. This includes the High Line ditch, whose capacity is 90 second feet, for our present purpose, this ditch may be eliminated. The other fifteen ditches have a total capacity of 272.8 second feet. This number of second feet flowing continuously for two-thirds of the time during the average irrigation season of approximately 100 days would amount to 36,372 acre feet. Even if the water was not kept in these ditches to their full capacity during two-thirds of the irrigation season, any allowance that should be made on that account is more than

offset by the fact that there are many other ditches not measured and not included in the foregoing. There are also many irrigation dams in the river channel and sloughs used for irrigation purposes but not considered in the above estimate. It is a significant and should be a persuasive fact that the ditches constructed prior to 1904 and now in use upon these properties, aggregate 49¼ miles in length. There are, therefore, 17½ miles of ditches on these properties, the capacities of which are not included in the above estimate. It is inconceivable that the owner of these lands would go to the expense of creating such an irrigation system as the foregoing indicates for the purpose of using such an insignificant quantity of water as the decree awarded to the defendant. Furthermore, there was no occasion for parsimony in estimating the amount of water to which the defendant was entitled as a prior right. It appears conclusively from the evidence that these waters are used upon lands that lie at a very slight elevation above the stream and that after the same are used, with the exception of such quantities as are consumed in plant life and evaporation, they return directly to the river channel and flow thence into the reservoir of the plaintiffs. Indeed it appears that all of the bottom lands at the San Jacinto Ranch occupy an area that in all probability at one time constituted a small lake. All of the water that is used either on the land or that flows under the surface through this old lake bed is drained by the deep gorge that begins approximately at the Nevada-Idaho state line and

extends northerly to and beyond the reservoir of the plaintiffs. There is no possibility of any of the water escaping in any other direction. In this connection it should also be noted that enormous quantities of water escape and are wholly lost one way or another from the plaintiffs' reservoir. On account of the physical structure of the walls of the channel, which by placing a dam across it, is now utilized for the reservoir, there has been and undoubtedly will continue to be a tremendous loss as a result of the escape of water through the seams and cracks in the walls of the reservoir. This, added to the extensive evaporation on account of the large surface of the reservoir, constitutes a factor of great importance. According to plaintiffs' witness Darlington (84), the loss from the reservoir by seepage and evaporation varied from 64,181 acre feet in 1912 to 38,032 acre feet in 1914. Thus the plaintiffs are given the right to waste as much water on an average as would be needed for the complete irrigation of defendant's lands. This waste, furthermore, is not like that which may be said to result from an excessive use of water upon the defendant's lands, because it can not return to the stream for use lower down, and does no one any good. As we have said, it makes comparatively little difference how much water is diverted and used upon the defendant's lands because the return is directly into the channel. The court refers to this in its written decision, in the following language:

"All the lands irrigated by the defendant prior

> to the commencement of the construction of plaintiffs' system lie close to the river channel, and the water table being near the surface the return flow by percolation and surface drainage to the river channel is naturally very great, so that the defendant's primitive and apparently extravagant method of using water is not so prejudicial to the plaintiffs' rights as it might otherwise be. While the evaporation incident to such a use may be somewhat excessive, still, at that altitude, and for the short irrigation season during which water is applied, I am inclined to think the amount thus lost is inconsiderable." (310.)

This being true, we cannot quite understand why the court conceived it to be justice to award to defendant only about one-fourth of the quantity of water that is actually needed for the irrigation of the lands in question.

In passing we might remark that there are some statements contained in the written decision of the court that have scant, if any, support in the record. It is evident that the court minimized the defendant's rights from almost every angle. The following statement, contained in the decision, is illustrative of this:

> "While it may be admitted that within reasonable bounds the application of water for the growth of wild grass for pasture alone may be held to be a beneficial use sufficient to support an appropriation, claims such as are here

made should be subjected to the closest scrutiny. I am not inclined to regard the desultory flooding of sagebrush land with the high water of a stream, in the crude method here employed, for the mere purpose of adding slightly to the growth of sparse natural vegetation, as furnishing a sufficient basis for the award of a water right adequate for all purposes. It is rudimentary, of course, that water may be appropriated for any beneficial use; but beneficial use is a phrase of relative meaning. Many uses can be conceived of, which, in an attenuated sense, are beneficial, but which would not support an appropriation; as a basis of a right the use must be of substantial benefit. It would require a high degree of courage, for instance, to affirm that the citizen can, to the exclusion of those who would use it for the raising of grains and fruits and other ordinary agricultural products, acquire the right to divert and spread out over thousands of acres of sagebrush land, upon which no homes are built, water at the rate of an inch per acre for the purpose of increasing the growth of wild grass from one-twentieth of a ton to one-tenth of a ton per acre. The use would in a literal sense be beneficial, but the benefit would be insignificant." (315-316.)

It certainly cannot be shown from the record that the defendant laid claim to the irrigation of any

lands "for the mere purpose of adding slightly to the growth of sparse vegetation." Nor do we call to mind any testimony justifying the inference that defendant was claiming any considerable amount of water for the purpose of a desultory flooding of sagebrush land with high water, or of increasing the growth of wild grass from one-twentieth of a ton to one-tenth of a ton per acre. However, the court's conclusion that this last mentioned use would not be a beneficial use is, as a legal proposition, extremely doubtful, to say the least. Judge Hawley, in Rodgers v. Pitt, 129 Fed. 932, says:

> "Looking further into the facts it will be discovered that, after the defendants had diverted the water of the river on to their lands, their acreage steadily increased year by year until they had about 4,000 acres under cultivation. In the estimates made by defendants of the number of acres under cultivation on complainant's land, they apparently overlook the plowed ground, and ignore the number of acres of pasture land or wild grass that were irrigated. It is in effect claimed that the use of water for pasture and for wild hay was not for a beneficial purpose. The courts have held otherwise. In Pyke v. Burnside (Idaho), 69 Pac. 477, it was expressly held that where one constructs a ditch and conducts water upon his land year after year, and permits the same to spread out over wild hay land for the purpose of making hay or using such land for pasture,

> he thereby secures the right to the use of sufficient water to irrigate such land, provided the amount of water so used is sufficient for that purpose; such use being a beneficial one."

To the point that it does not lie within the province of a court to compel users of water to adopt any particular system, the following language is quoted from the same opinion, and expresses our view of the law:

> "Absolute perfection in the system of irrigation in this state, has, perhaps, not yet been reached, and it is doubtful if any system could be devised that would not, in the opinion of some scientists and experts, 'be defective more or less.' The contention that the prior appropriators of the water ought to be compelled to change their system for the exclusive benefit of the subsequent appropriators, who use the same system, does not appeal, in the light of all the facts in this case, very forcibly to a court of equity, as being sound. It would seem more just to allow the complainant to change his system, if he can and desires so to do, and to adopt any system that would allow him to so use the amount of water to which he is entitled as would enable him to cultivate more of his land. The court cannot, in the absence of any law upon the subject, compel the farmers to use any particular system, but it might, in a case where an extravagant and wasteful system is used, which demands more water

> than they are entitled to by virtue of their appropriations, declare that under such circumstances they were not entitled to the quantity of water they were using, and give the excess to subsequent appropriators. But this is not such a case. The testimony shows that the system referred to is used by all the farmers in Lovelock Valley—by the defendants as well as by the complainant."

The trial court also says in its decision that it is unwilling to award three acre feet per acre for defendant's grain and hay lands and only one and one-half acre feet generally for the lands upon plaintiffs' project. This conclusion was reached notwithstanding the fact that the only evidence there is in the record concerning the duty of water on plaintiffs' lands is the testimony of their own witnesses in which it was stated that the duty of water for those lands is *one and one-half acre feet per acre.* (68.) Again, the evidence, without conflict, shows (169) that it requires fully as much water for the irrigation of pastures as for the irrigation of grains. Yet the court says in its decision: " * * * three acre feet would be a reasonable seasonal allowance to be made for hay and grain land and one and one-half acre feet for pasture." (318.) This statement is also contained in the decision: "I cannot believe that there is any serious need for water at such an elevation prior to the first of May." (317.)

Mr. McClellan testified (119), "The irrigation extends from on or before the first of April to between the first and tenth of July."

Mr. Yost, a witness for plaintiffs, testified (257), "Each year I would be irrigating something like three months, beginning with the first of April."

Thomas R. Beason (216), said: "It (the water) was turned on this spring about the first of April or maybe along in March."

Our recollection is that there is absolutely no evidence to the contrary. Indeed, the defendant's claim that the irrigation season commenced not later than the first of April was not contested on the trial.

The finding in the decision to the effect that defendant had under irrigation prior to 1907 only 3,000 acres of hay and grain lands and 2,500 acres of pasture lands is, we submit, arbitrarily made. According to the testimony of plaintiffs' witnesses, Darlington and Stocking, in connection with plaintiffs' Exhibit No. 33, defendant had under irrigation only about 2,600 acres. As is evident, the court did not adopt this exhibit or the testimony of these witnesses in connection with said exhibit as a basis of arriving at the defendant's irrigated acreage. The court having rejected the only testimony introduced by plaintiffs with respect to the acreage, we cannot conceive of any reason why it did not find the facts in accordance with the only remaining evidence, that is to say, the evidence of the defendant.

The court in its decision also infers that it was able to come to some conclusion concerning the quantity of water used upon the defendant's lands from data contained in the Herrington Report. This report was not formally introduced in evidence at the

trial but it was stipulated that it might be considered by the court the same as if it had been introduced, and for that reason it has been certified to this court in the same way as maps and other exhibits that were not incorporated in the printed transcript.

We submit that there is nothing in the Herrington report that justifies the deductions mentioned in the court's decision. It is true that in Table 4 of said report, it appears that the defendant diverted 16,206 acre feet during 1914. But it must be remembered that the author of the report did not pretend, in arriving at the above estimate, to take into consideration all of the diversions made by the defendant in that year. On the contrary, the diversions accounted for include only those in ten of the defendant's ditches, and covered only a portion of the irrigation season. The measurements covered a period of 50 days on the Upper Vineyard ditch, 60 days on the Lower Vineyard ditch, 12 days on the Bird's Nest ditch, 20 days on the Island ditch, 65 days on the San Jacinto or Middle ditch, 24 days on the West Bore's Nest ditch, 21 days on the East Bore's Nest ditch, 18 days on the Harrell ditch, 60 days on the High Line ditch, and 65 days on the North Side ditch on the Bridge Ranch. The earliest measurements were made on the 16th of May and therefore do not include any of the irrigation that took place prior to that time. If it be assumed that the canals during the period from April 1st to May 16th carried water to their full capacity, there would be a total of more than 35,000 acre feet applied to the land in addition

to the 16,206 acre feet accounted for by the author of the report. It must also be noted that no measurements were made on the Hubbard Ranch, or on Nall Creek, Upper Trout Creek, Big Creek, Hot Creek, Shoshone Basin or from Jake's Creek on the Vineyard Ranch. Likewise no measurements were attempted to be made of any of the waters that were placed on the lands by means of dams in the main channel and in the sloughs and other natural water courses. At page 4 of the report the author says:

> "The secondary object of the investigation, namely, the determination of the total quantity of water actually diverted for irrigation use upon the lands of the Utah Construction Company, is necessarily somewhat indeterminate, because of the flooding system of irrigation followed during the early part of the season when large quantities of water were flowing in the streams."

On page 7 of the report it appears that the water used for irrigation from the upper half mile of the Bird's Nest ditch was not taken into account. On page 9, second paragraph, of the report, it is made clear that no account was taken of any of the water diverted through the Moore cut, the Lower Island ditch, or the Gray ditch, onto the tract referred to in the testimony as the Island. It is very clear therefore that the diversions accounted for in this report are wholly insufficient to furnish a basis for estimating the total diversions onto the defendant's lands in the year 1914.

Before leaving this subject we suggest that some regard should be paid to the conditions that have heretofore prevailed in that section of the country where defendant's lands are located. They are remote from railroads and from settled communities. Intensive farming is not practicable. Such crops only could be produced profitably as served to furnish sustenance, in the form of hay and pasturage, for cattle and horses. Into the fields the cattle were gathered in large numbers in the fall and winter, and it would have been a positive disadvantage to have had any kind of crop that needed protection from the animals. It stands to reason that under these conditions the defendant would not be justified in making an outlay of money sufficient to enable it to carry on irrigation the same as that carried on for the purpose of producing crops possessing a high market value.

APPELLANT'S RIGHTS UNDER THE HIGH LINE CANAL.

The trial court found that the defendant was entitled to 12,000 acre feet of the waters of said streams for use upon the lands located under and susceptible of irrigation from the High Line Canal, but declared such right to be subsequent and subject to plaintiffs' rights. As already stated, this co-called right of the defendant is valueless. Admittedly, plaintiffs were decreed rights of such lavish proportions as to entitle them to many times more water than Nature has provided in Salmon River. So that any right that is made subject to plaintiffs' rights

would exist in name only. We think the court erred in not finding that the defendant's rights under the High Line Canal were prior to plaintiffs' rights.

This canal is referred to in the record by different names. It has been called the High Line Canal, the Harrell ditch, and the Big ditch. Its location appears on defendant's Exhibit No. 12, and other exhibits, and is the ditch whose diversion point is on the east side of the main channel of the stream at the upper end of the San Jacinto Ranch. It extends northeasterly for a distance of about eight miles. At a distance of about four miles below the head of the ditch it crosses what is referred to in the testimony as the San Jacinto lane. The importance of mentioning this point in the canal will more clearly appear later on. The lands below the San Jacinto lane that have been and are to be irrigated by means of the canal are colored yellow on Exhibit No. 12, and, as already stated, aggregate approximately 4,500 acres. The highest of these lands lie at an elevation of approximately 100 feet above the bottom lands, and there is a gradual slope from the canal to the edge of the bottom lands on the east side of the stream. It will be seen that the canal is only about two miles from the channel of the stream at its remotest point. The lands under the canal were originally covered with sagebrush, and, when supplied with irrigation, are capable of producing valuable crops of cereals and alfalfa. The sagebrush has been cleared and the area colored yellow on Exhibit No. 12 has been placed under cultivation, with alfalfa as the prin-

cipal crop. It is not claimed that this was done prior to the initiation of plaintiffs' rights. It is respectfully contended, however, that defendant's rights to the use of water for the lands under the High Line Canal *relate* to a date prior to December 29, 1900, the date of the first appropriation made by plaintiffs. We will proceed to give a brief history of the construction of this canal and of the application of water to beneficial uses thereunder, and will start with the notices appearing at pp. 287-88 and 291-95, of the Transcript. The court restricted the purposes for which these and other similar notices relating to other ditches, were received in evidence. Inasmuch as this ruling of the court forms the basis of the seventeenth assignment of error, we will briefly consider that assignment at this point. Omitting the notices that do not relate to this canal, it is as follows:

"XVII.

"The court erred in limiting the purposes for which defendant's Exhibits numbered 2, 3, 8 and 9 were receivable in evidence, and in ruling that said exhibits were admissible for the sole purpose of showing an affirmative act in the way of instituting water rights at the dates of said exhibits, respectively, in the same way as any other act, as the making of a survey, might be taken as evidence of an intention to appropriate water at that time.

"Defendant's Exhibit No. 2 contains the following:

"(a) The original notice of location of the

Harrell Ditch (or High Line Canal). It is executed and acknowledged by John Sparks, president of the Sparks-Harrell Company, on the 28th day of November, 1892, and was filed for record in the office of the County Recorder of Elko County, Nevada, on the .... day of November, 1892. It states the point of diversion, the length, width and depth of the proposed canal, and a general description of the lands (aggregating about 4,000 acres) to be irrigated. It claims 5,000 miners' inches of water from Salmon River. A plat is attached to the notice showing more particularly the location of the ditch, as well as of the lands to be irrigated.

* * * *

"(c) Water and ditch location notice relating to the Harrell Ditch (or High Line Canal). It was executed by John Sparks, president, and Andrew J. Harrell, secretary, of the Sparks-Harrell Company, and acknowledged on the 9th day of June, 1899; it was filed for record in the office of the County Recorder of Elko County, Nevada, on the 12th day of June, 1899. It gives a particular description of the point of diversion, location, length and other dimensions of the proposed canal, as well as a description of that part of the canal already constructed; it states that it is made to describe all changes from the survey of November 5, 1892, and to give a more definite de-

> scription of the lands covered and to be irrigated therefrom. The lands to be irrigated are specifically described (being the same lands as those under the canal as now constructed) and is accompanied by a map showing the location of the ditch and the lands to be irrigated therefrom. The line of the proposed canal is the same upon which the canal was afterwards constructed."

* * * *

At the time the notices were received in evidence the court limited the purposes for which they were to be received to "the sole purpose of showing an affirmative act in the way of initiating water rights at the date of the respective exhibits, in the same way that any other fact, as the making of a survey, might be taken as evidence of intention to appropriate water at that time, but said exhibits are not to be received for any other purpose or to be regarded as having any other legal effect." (99-100.) It was the defendant's contention at the trial that the true legal effect of these notices was much broader than that expressed by the court. They were filed with the proper officer and recorded in pursuance of statute, and constituted, as we contend, constructive notice to plaintiffs of the facts set forth therein. At the time the notices were filed the following statute was in force and effect in the State of Nevada:

> "Section 1. Any person or persons desiring to construct and maintain a ditch or flume, within any one or more of the counties of this state, shall make, sign, and acknowledge, before

some officer entitled to take acknowledgments of deeds, a certificate, specifying: First, the name by which the ditch or flume shall be known; and, second, the names of the places which shall constitute the termini of said ditch or flume. Such certificate shall be accompanied with a plat of the proposed ditch or flume, and shall be recorded in the office of the County Recorder of the county or counties within or through which such ditch or flume is proposed to be located; and the record of such certificate and plat shall give constructive notice to all persons of the matters therein contained. The work of constructing such ditch or flume shall be commenced within thirty days of the time of making the certificate above mentioned, and shall be continued with all reasonable dispatch until completed."

425 Compiled Laws of Nevada, 1861-1900, Sec. 1.

Section three of the same Act is as follows:

"Sec. 3. The person or persons constructing or maintaining a ditch or flume, under the provisions of this Act, shall have the undisturbed right and privilege of flowing water through the same, to the full extent of its capacity, for mining, milling, manufacturing, agricultural and other domestic purposes, and to use the same at any necessary and convenient point or points along the line thereof; provided, that nothing in this Act contained shall be so construed as to interfere with any prior or exist-

ing claim or right. *As amended, Stats. 1889, 96.*"

The history of the physical construction of the ditch, briefly stated, is about as follows: The work commenced in 1893, and during that year the ditch was completed for a distance of about ten chains. (130.) In 1894 the Roland Slough was enlarged and made a part of the ditch (130), and about half a mile of lateral ditches was constructed from this slough. (130-31.) In 1897 Mr. McClellan surveyed and located the ditch on its present site for a distance of 77 chains, and construction work on this survey commenced in that year. (131.) In 1898 the survey was continued on the present line of the ditch for a distance of 253 chains, to a point opposite the San Jacinto lane. (131.) In 1899 an amended location notice (part of defendant's Exhibit No. 2) (291-295), was filed with the County Recorder of Elko County, Nevada, and this notice, besides giving the dimensions of the ditch, specified the lands that were to be irrigated therefrom. The lands as described in the notice are the same as those that now lie under the ditch as completed. In 1899 Mr. McGuire had charge of the ditching crews, first under Mr. Moore and later personally, and continued the construction to a point about a quarter of a mile north of Warm Springs lane. (162.) Work was also done on the ditch under Mr. Rainwater in 1900. (160.) In 1901 he had personal charge of the work and the ditch was extended northerly for a distance of about three-quarters of a mile, to the San Jacinto lane. In 1904

Mr. McClellan extended the survey to the terminus beyond the San Jacinto lane (132), and in the same year construction was continued from the San Jacinto lane northerly for a distance of about a quarter of a mile. The last work that Mr. McGuire remembered doing on the canal was in the latter part of June or the first part of July, 1904. (161.) The ditch, as constructed to the San Jacinto lane, being a distance of about four miles, was about ten feet wide on the bottom. (160.) It appears that no more work of any consequence was done between July, 1904, and some time in May, 1909. In the meantime the managing owner of the property, Mr. Andrew Harrell, had died (223) and the property had been purchased and taken over by this appellant, whose agent, Mr. Adam Patterson, took charge in November, 1908. As soon as the season opened up in the following year Mr. McClellan was employed by the appellant to make a re-survey, and this was done. (166.) In May or June, of the same year, Mr. Patterson commenced the work of construction and thereafter diligently pursued the same until the canal was completed. In 1911-12-13 and 14, land under the canal approximating 4,500 acres was cleared, plowed and planted. On the assumption that there will be no contention that the work was not diligently pursued after the appellant became the owner of the property, we will refrain from rehearsing in detail the testimony with reference to the completion of the canal from the point it had reached in 1904. The facts relative to these matters appear in the tes-

timony of Adam Patterson (166) and Thomas R. Beason. (213-217.)

The court's analysis of the evidence relating to the progress of the construction of the High Line Canal appears in the decision (310-315), but we think the real point is missed. The precise point to be determined is this: What was the status of defendant's appropriation of water for the High Line Canal on December 29, 1906, when appellees' application for appropriation was filed with the State Engineer of the State of Idaho? It seems to us that the lapse of time between the commencement of the canal in 1893 and the date of filing the second notice of appropriation on the 12th day of June, 1899, is wholly immaterial. It must be admitted that under the evidence appellant's right was alive when this second notice was filed. From that time until some time about the first of July, 1904, the work of construction proceeded with reasonable diligence. From that date until plaintiffs filed their application, there was apparently nothing done on the canal in the way of additional construction. Neither was there anything done in 1907, the year in which Mr. Harrell died, nor in 1908, the year in which the negotiations for the sale of the property to the defendant took place. That is to say, for a total period of something more than four years, no work was done for the purpose of extending the ditch. Thereafter, however, the work was continued; the ditch was completed and the lands brought under cultivation within a reasonable time. Can it be said then, as a matter of law,

that appellant's rights lapsed on account of the cessation of work on the canal for the two years just prior to the filing of the application for appropriation by plaintiffs, or even for the period of a little more than four years from June or July, 1904, until the spring of 1909? It must be remembered that this section of the country is remote from any railroad, and has long winter seasons in which such work as the construction of canals cannot be economically performed. Neither the defendant nor its predecessors in interest had any notice or intimation whatever of any attempt by plaintiffs or anyone else to appropriate any of these waters during this period. The plaintiffs' filing was made in the office of the State Engineer of the State of Idaho, and there was, of course, no record of it in any public office in Nevada. Plaintiffs' works were located many miles down the stream in an isolated and more or less inaccessible section of the country. The defendant's lands, including the several properties hereinbefore mentioned, were scattered over a wide area and were used only for ranching purposes. So far as the record discloses anything in this regard, it has never been the intention of the defendant or its predecessors in interest to attempt to bring any of these lands, with the exception of the tract under the High Line Canal, under intensive cultivation. There is some suggestion in the court's decision to the effect that about the time the plaintiffs filed on this water there was generally known to be more or less activity along the line of irrigation development throughout the West;

yet there is nothing in the record to indicate that there was anybody so optimistic as to believe that any very extensive irrigation development would ever take place along the barren reaches of the Salmon River and its tributaries where the defendant's lands are located, or, for that matter, anywhere else in that section of the country. It is not surprising at all that it is only within recent years that the plans which had their inception in the early nineties with respect to the lands under the High Line Canal were consummated. Like all properties similarly situated, covering extensive areas, on account of the sparse growth of vegetation, the development has necessarily been much slower than in communities where the lands were fertile, readily accessible and within easy reach of the markets. It would be manifestly unfair and unjust to expect the same progress of development on these lands as has taken place for example under the plaintiffs' project. Notwithstanding all of the inducements for expeditious development on plaintiffs' project, in eight years subsequent to the filing of the first application for appropriation there was only 30,000 acres of land brought under irrigation. We submit that in determining defendant's rights in the premises all of the surrounding circumstances and conditions, and the standards prevailing in wild and unsettled sections of the mountain states should be taken into consideration. There is, and can be, no hard and fast rule as to what does or what does not constitute reasonable diligence in the application of water to a beneficial use. In some cases

it has been held that the lapse of comparatively short periods of time would thwart an attempted appropriation, while in other cases periods of eight or ten years have been held not to be unreasonable. Moss v. Rose, 27 Ore. 595, Rodgers v. Pitt, 129 Fed. 932, and Hall v. Blackman, 8 Idaho 272, are illustrative. It is the public policy of the State of Neveda, as declared by section 65, chapter 140, of the Session Laws for 1913, that a maximum of *ten* years should be allowed for the purpose of applying water to a beneficial use. The statute provides that the State Engineer shall, among other things, endorse upon an application "a time prior to which the complete application of the water to a beneficial use must be made, which time shall not exceed *ten* years from the date of said application."

It cannot be denied that defendant's predecessors in interest intended to appropriate water sufficient to fill the High Line ditch. It is equally incontestable that there has been an actual diversion of the water through this ditch ever since it was completed as far north as the San Jacinto lane. The size of the ditch, as it appeared when plaintiffs made application for a water right, constituted notice in concrete form of the intention of the then owners to irrigate the lands that were afterwards brought under cultivation. Above the San Jacinto lane there was only a narrow strip of land to be irrigated from this ditch. A small fractional part of the water that the ditch would carry would be sufficient to irrigate the lands in this strip. This fact, considered in con-

nection with the notices of location, was ample notice to the world that it was the intention of the predecessors in interest of defendant to irrigate these lands. It was in the face of this situation that plaintiff saw fit to file on these waters for speculative purposes.

It certainly is a drastic penalty to hold that defendant got absolutely nothing as a reward for all that it and its predecessors have done in connection with this canal. It seems to us that it is a case that calls for a liberal application of the principles of law appertaining to appropriations of water. If appellees had been misled in any particular it would be quite a different matter. Far from being misled in the premises, they had both actual and constructive notice of appellant's rights, and never gave any intimation of a conflicting claim with respect to the use of waters until this suit was filed. It is not unreasonable to indulge the suspicion that it is the litigation between plaintiffs and the settlers, to which the court refers in its decision, and that only, that has called forth the effort on the part of the plaintiffs to assert their claim of superior rights, in the hope, perhaps, that in so doing they would partially extenuate their failure to supply water to the settlers. For, even if it be conceded that plaintiffs have the superior right, the loss to them and their settlers that would result from the irrigation of the lands under the High Line Canal would be so insignificant as to be negligible, particularly so when compared to the loss sustained by defendant if its

superior right under this canal is denied it. From the physical conditions generally, including the location of these lands, the character of the soil, subsoil, and underlying strata, it is plain that the water used for irrigation naturally and necessarily flows back into the stream below, with the exception of the small part that is consumed by plant life or evaporates. We do not deem it necessary to cite numerous cases with reference to what constitutes a valid appropriation of water, but taking everything into consideration, we think the facts of this case call for the application of the liberal rule announced in such cases as Kimball v. Gerheart, 12 Cal. 27, where it is said:

> "In appropriating unclaimed water on public lands only such acts are necessary and only such indications and evidences of appropriation are required as the nature of the case and the face of the country will admit of and are under the circumstances and at the time practicable; and surveys, notices, stakes and blazing of trees followed by work and actual labor without any abandonment will in every case where the work is completed, give title to water over subsequent claimants. * * * In determining the question of plaintiff's diligence in the construction of their ditch the jury have a right to take into consideration the circumstances surrounding them at the date of their alleged appropriation, such as the nature and climate of the country traversed by

said ditch, together with all the difficulties in procuring labor and materials necessary in such cases."

Also in I Wiel on Water Rights, Third Edition, page 415, where it is said:

"Diligence does not require unusual or extraordinary efforts, but only such constancy and steadiness of purpose or of labor as is usual with men engaged in like enterprises."

What is referred to in Wiel as the doctrine of appropriation for future needs is peculiarly applicable to the facts of this case. This doctrine is stated quite fully in I Wiel on Water Rights, Third Edition, sections 483 to 485-a, and numerous cases there cited. The following is from section 483:

"In considering the amount of water to which an appropriator is entitled, there is introduced a new feature to meet the requirements of irrigation. The history and principles so far stated show that the system of appropriation aims fundamentally at definiteness and certainty. It allowed the prior appropriator to take what he wanted and do with it what he wanted, if he let the world know, so that later comers would have to take things as they found them, and would know what they could take. * * *

"The need for water grows as the area cultivated grows. The settler can cultivate, perhaps, only a few acres the first year; but he does everything with a view to later expan-

sion. As is said in one case, it is reasonable to suppose that reclamation of the entire area owned at the time of diversion is contemplated. Before his larger acreage is clear and planted, however (which may take several years), other claimants to the use of the water have arrived. Does the law allow the former to continue increasing his use in the face of these later claimants?

"It seems well settled that such is the rule. The amount used need not be a fixed, constant quantity. The amount used is still a limit, as previously set forth. But it is a movable limit, which may gradually increase as the irrigator's needs increase. The principle has been repeatedly affirmed. In California this principle was affirmed in Senior v. Anderson; though the enlargement was not upheld on the facts of the case. There seems no other California decision on the point, the court relying on Oregon cases. In a later case the California Court said: 'There are cases which hold that the diversion of a large quantity of water is a good appropriation of the whole *ab initio,* although it is not all used at first, if the design is gradually to extend the use, and that design is carried out before an adverse appropriation of the surplus below the point where it is returned to the stream. But this is a point which has not been argued, and we merely allude to it in passing.' The essential

point of the rule is not correctly stated in this passage, since the essence of the rule is that the design may be carried out in spite of an intervening appropriation elsewhere on the stream, as the quotations below show.

"The same doctrine has been applied to future enlargement of use for power purposes as well as irrigation."

The limitations upon the principle of providing for future needs are stated in section 484, from which the following is a quotation:

"First, the future needed amount must be originally claimed at the time of initiating the appropriation; being the limitation already stated, to the original claim. The future needs must have been in mind and claimed at the time the appropriation was originally made, and not a mere afterthought. That is, the enlarged use must be part of an original policy of expansion. Otherwise, it cannot prevail over interveners. Water for future needs must have been part of the original appropriation, and if a decree settling rights is made, such right, if not included therein, cannot be claimed thereafter. Use on after-acquired land must have been contemplated at the time of the original appropriation.

"Second, the future enlargement cannot exceed the original capacity of the ditch. Among the settled propositions of the law of appropriation, Judge Hawley includes the following:

'That if the water is used for the purpose of irrigating lands owned by the appropriator, the right is not confined to the amount of water used at the time the appropriation is made; that the appropriator is entitled not only to his needs and necessities at that time, but to such other and further amount of water, *within the capacity of his ditch,* as would be required for the future improvement and extended cultivation of his land, if the right is otherwise kept up.' "

As to the duty of water for the irrigation of the lands under the High Line Canal, appellant concedes that it is somewhat higher than would be required for the irrigation of the meadow lands. From the fact, however, that the land is still used for ranching purposes and cannot be cultivated and cared for in the same economic way that small holders of lands would care for their farms, it certainly is not unreasonable to ask for three acre feet per acre, or a total of 13,500 acre feet for the 4,500 acres of land.

The Decree is Erroneous in Quieting Title in Plaintiffs to More than 45,000 Acre Feet of Said Waters.

Under this head the third and tenth assignments of error can be conveniently discussed. These assignments are as follows:

"III.

"The court erred in decreeing absolutely to plaintiffs any of the waters of Salmon River and its tributaries in excess of the quantity, to-wit, about 45,000 acre feet, which has been

used by plaintiffs for beneficial purposes, and in enjoining the defendant from using any of such excess waters prior to the actual application of the same to the beneficial uses for which said waters are claimed, and in making and entering any decree herein with respect to such excess, except to determine the amount thereof that can be diverted through plaintiffs' works and the priority of the same, and to set a time within which such amount of such excess shall, subject to the rights of the defendant, be applied by plaintiffs to the purposes for which the same is claimed." (343.)

"X.

"The court erred in making and entering its decree herein awarding to and quieting title in plaintiffs to the right to use each season 235,000 acre feet of the waters of said Salmon River and its tributaries, and in awarding and decreeing to plaintiffs any quantity of said waters in excess of 45,000 acre feet, and in decreeing that any right of plaintiffs to the use of said waters is prior to any right of the defendant thereto." (345-46.)

It will be remembered that in 1915 when this cause was tried, there was under irrigation under plaintiffs' project approximately 30,000 acres of land. (66.) The duty of water, as then claimed by plaintiffs, was one and one-half acre feet per acre (68), which would amount to 45,000 acre feet. The court awarded to plaintiffs 235,000 acre feet of the

waters of said streams. (319, 323.) Thus the decree seems to be based on the theory that plaintiffs were entitled to a decree fixing their vested as well as their inchoate rights under their permits, and enjoining the defendant from interfering in the future with such rights, either vested or inchoate. There have been instances, it will be conceded, in which decrees have been entered granting injunctions against future violations of plaintiffs' rights, in the absence of any present infringement or damage. These cases, however, are all confined to the protection of rights that have already vested, although they may be not at the time infringed. For instance, a riparian owner, whose title does not depend upon beneficial use, may be entitled to a declaratory decree protecting his present rights as against any future invasion, but the rights of the riparian owner under such circumstances are present rights, not rights to be earned *in futuro*. The same doctrine is applied in cases of the diversion of underground waters, where, as in Burr v. Maclay, 98 Pac. 260, it is said:

> "If the adjoining overlying owner does not use the water, the appropriator may take all the regular supply to distant land *until* such landowner is prepared to use it and begins to do so."

This is upon the principle that the owner of underground water, by virtue of the ownership of the lands in which it is found, has the present right to its use, but he should not be allowed to enjoin its use by another who draws it out or intercepts it or to whom

it may go by percolation, although perhaps he may have a right to a decree settling his right to use it when necessary on his land if a proper case is made. But in both of the instances discussed above, that is, the right of a riparian owner and the right of an owner of land to its underground waters, there was involved present actual rights, not prospects contingent upon future acts. By reference to the decree it will be seen that the lands described therein and for the irrigation of which plaintiffs are awarded water rights, include an area of more than 221,520 acres. This includes over 148,520 acres more than water rights have been sold for, and over 191,520 acres more than was under irrigation at the time of the trial. Considering the quantity of water wasted from plaintiffs' reservoir and distributing system, in connection with the limited water supply available, it would seem to be extremely doubtful if there will ever be under this project a very much greater area brought under irrigation than existed in 1914. The court, nevertheless, quieted title in plaintiffs to 235,000 acre feet, of which the excess over 45,000 acre feet had admittedly never been applied to a beneficial use, and as to whether any part of such excess would be so applied is a matter of conjecture pure and simple. The decree of the court quieting title to this excess is erroneous on general principles and in violation of the following provisions of Chapter 35, Laws of Idaho for the year 1913, amending section 4621 of the Revised Statutes:

"In allotting the waters of any stream by the

District Court according to the rights and priorities of those using such waters, such allotment shall be made to the use to which such water is beneficially applied, and when such water is used for irrigation, the right confirmed by such decree or allotment shall be appurtenant to and shall become a part of the land which is irrigated by such water, and such right will pass with the conveyance of such land, and such decree shall describe the land to which such water shall become so appurtenant. The amount of water so alloted shall never be in excess of the amount actually used for beneficial purposes for which such right is claimed; *provided,* that in the case of works capable of diverting more water than is applied to a beneficial purpose at the time the rights of the person or persons owning or using such works are adjudicated by the Court, the right only to the water beneficially applied at the time of making such allotment shall be confirmed by the court, and the court shall ascertain the amount of water which can be diverted through such works in excess of such quantity beneficially applied, and shall set a time when such amount shall be applied to the beneficial purpose for which it is intended, which time shall not exceed six years from the date of the decree issued by such court under such adjudication, and any person using any of such water which was not beneficially

applied at the time of such adjudication shall, before the expiration of the time set for such beneficial application, make proof of such beneficial use in the manner provided in Section 3260 of the Civil Code, and such right, when confirmed in the manner provided in this Chapter and Chapter 2 of Title 9 of the Civil Code shall relate to the priority established by such court, and if such application of any of such water shall be made subsequent to such date, then the priority of the right to the use thereof shall be determined in the manner provided in Section 3261 of the Civil Code."

The Supreme Court of Idaho, in Sugar Company v. Goodrich, 147 Pac., at page 1076, say:

"The state is the sovereign owner of the right to appropriate and use all of the stream waters which are within the jurisdiction of the state. The state, by enactment of appropriate laws, permits private persons to use its right to appropriate and use the flow of stream water. A water right claim is not a water right. A water right claim is a declaration of intention, made in a written form prescribed by statute, to give public notice of intention to create water rights identical with descriptions stated in the writing, commonly referred to as a water right. Although they are not, water right claims have become commonly regarded as being the same thing as water rights. One is a mere declaration of intention to cre-

ate a water right which may never be anything more than an intention. By a compliance with conditions of the permit, the water right claim then becomes a water right. The statute may permit an appropriator to change any or all of the conditions contained in the declaration of intention, except the particular stream from which the diversion is intended to be made, but it could not be successfully maintained that a subsequent appropriator's right to the use of the waters of a stream should be impaired by a change in the declaration of intention to appropriate by the act of the party, or with the consent of the state engineer, or to change the point of diversion. The extent of the permit of the state is measured by the use of the water under the conditions and limitations of the permit. A failure to put the water to a beneficial use, or to comply with the conditions of the permit, is an abandonment of the use, and this would be true whether or not there was a statute containing such a provision."

Numerous authorities might be cited in which the principle now under discussion has been applied. The following brief quotations will serve to illustrate the manner in which the principle is appled to water cases.

In Miles v. Butte Electric & Power Co., 79 Pac. 549, it was said:

"Until a claimant is himself in a position to

use the water of a stream subject to appropriation, the right to the water or water right does not exist in such sense that the mere diversion of the water by another is a ground of action either to recover the water or for damages for the diversion."

In Green Valley Ditch Co. v. Frantz (Colo.), 129 Pac. 1006, the court say:

A decree for plaintiffs in an action to quiet title to an irrigation ditch and its appropriation therefrom should be limited to the amount theretofore actually carried through the ditch and applied to a beneficial use, making the necessary allowance for seepage and evaporation."

In Bowen v. Spaulding (Or.), 128 Pac. 37, the court say:

"The drastic remedy of injunction will not be granted to protect water rights unless not only the appropriation by notice but also the actual application of the water to the intended use and the necessity of the use for the purpose in question be clearly shown."

The Court erred with respect to those provisions of the decree intended to operate upon property and rights, and to regulate the internal affairs, of appellant in a foreign state.

Under this general heading may be grouped for discussion the following assignments of error:

"V.

"The court erred in decreeing that the 12,500

acre feet of the waters of said Salmon River and its tributaries awarded to defendant as a prior right to the rights decreed to plaintiffs, can be used only upon such of the defendant's lands in the State of Nevada, and particularly described in the decree herein, as were reclaimed by defendant and its predecessors in interest prior to the year 1907. (344.)

"VI.

"The court erred in making and entering its decree herein enjoining the defendant from using any part of said 12,500 acre feet of the waters of said Salmon River and its tributaries so decreed to defendant as a prior right, upon the lands of defendant located under the High Line, or Harrell, Canal, and particularly described in Assignment number II. (344.)

"VII.

"The court erred in making and entering its decree herein enjoining the defendant from changing the points of diversion and places of use of the waters of said Salmon River and its tributaries, as authorized by law and particularly as authorized by the laws of the State of Nevada. (344.)

"VIII.

"The court erred in making and entering its decree herein enjoining the defendant from irrigating its lands by means of dams placed in the natural channels of said Salmon River and its tributaries and in the sloughs and other

channels leading therefrom, thereby flooding said lands without the use of artificial canals, ditches and conduits, and in enjoining the defendant from diverting any of the waters of said stream or its tributaries, except by means of ditches or other devices provided with automatic guages. (344-45.)

"IX.

"The court erred in making and entering its decree herein requiring the defendant to install in all of its ditches, canals and conduits, in the State of Nevada, automatic measuring devices for measuring all waters used by the defendant from said streams, in said state, and in decreeing that all such measuring devices and guages shall at all times be subject to the inspection of plaintiffs; and in decreeing that the plaintiffs should have the right to go upon the lands of the defendant in the State of Nevada for the purpose of inspecting the measuring devices installed by defendant in its said ditches, canals and conduits. (345.)

"XI.

"The court erred in making and entering its decree herein retaining jurisdiction in said cause for the purpose of making rules touching the manner of defendant's diversions, measurements and distribution of the waters of said Salmon River and its tributaries in the State of Nevada; or for the purpose of directing defendant to keep records of the

amounts of water of said streams diverted and used by it in the State of Nevada; or for the purpose of appointing water-masters or commissioners with authority to go upon the said premises of the defendant in the State of Nevada and to distribute to the defendant the waters of said streams to which it is entitled for the irrigation of its lands in said state; or for the purpose of making any order whatever touching the distribution, use, points of diversion or places of use of the waters of said streams by the defendant in connection with the irrigation of its lands in the State of Nevada." (346.)

By its decree the court in substance provides, (a) that appellant must use the waters constituting its prior right, as recognized by the decree, only upon such lands belonging to the appellant as were irrigated by it prior to 1907 (328-329); (b) that appellant must install in its canals and ditches automatic measuring devices and refrain from the use of any waters for the irrigation of its lands except such as are diverted through canals and ditches provided with such automatic measuring devices; (c) that the measuring devices so provided by appellant shall at all times be subject to the inspection of appellees and that appellees shall have the right perpetually to go upon and over appellant's lands in Nevada for the purpose of inspecting such measuring devices; (d) that the court retain jurisdiction for the purpose of making all reasonable rules touching the manner

of diverting, measuring and distributing the waters belonging to appellant in Nevada, and for directing that appellant "keep accurate and detailed records of the amounts of water diverted and to require reports to be filed from time to time of the amounts so diverted, and generally to make such orders as may be found reasonably necessary to give effect to the decree, and to appoint commissioners or water-masters to make distribution in accordance with its terms."

While it is freely conceded that a court of equity with jurisdiction over the persons of litigants, can, under some conditions, enjoin them from the performance of acts with respect to property outside of the territorial jurisdiction of the court, and can even go so far as to compel a party to perform affirmative acts for the abatement of a nuisance in a foreign state, where the injurious effect of such nuisance operates upon property or rights of one of the parties within the jurisdiction of the court (Salton Sea cases), yet we know of no case in which a court of equity has attempted to give ex-territorial operation to its decree to anything like the same extent as is attempted by the decree now under consideration. Generally speaking, the power to exercise injunctive control of a person with respect to property beyond the territorial jurisdiction of the court must be based upon duties or obligations growing out of trust, contract, or fraud. It is conceived that these furnish a basis for the exercise of control over the conscience of a party. In a few cases, and seemingly *ex neces-*

sitate rei, injunctive relief has been granted in the case of torts committed beyond the jurisdiction of the court. (Rickey Land and Cattle Co. v. Miller and Lux, 152 Fed. 11; Willey v. Decker, 11 Wyo. 496; Howell v. Johnson, 89 Fed. 556; Taylor v. Hulett, 15 Idaho, 255.) The principle of these cases was extended somewhat in the Salton Sea cases so as to compel the performance of such affirmative acts as were necessary (stopping the flow of water) to abate the nuisance complained of. In this decree, however, a more or less elaborate system of regulation and control directly affecting appellant's rights and property in Nevada is provided for. The court was not content to define the rights of appellant and to leave the matter of administration of such rights to the control of the state officials of Nevada, whose duties are imposed by the legislature of that state, but in addition to granting injunctive relief, the court commands the performance of affirmative acts in no wise necessary in order to put an end to the operation in Idaho of any wrongful act of appellant in Nevada, and also attempts to regulate the internal affairs of appellant and to directly affect property and rights whose situs is in the foreign state. The placing of automatic measuring devices in the canals and ditches of appellant is clearly separable from the injunctive relief granted by the decree. It will not be contended that appellant would necessarily have any difficulty in rendering obedience to the injunction without the aid of such appliances. It may be said, indeed, that the use of automatic measuring

devices is exclusively for the purpose of enabling appellees to inform themselves as to whether or not appellant is obeying the injunction. The consequences of the use or non-use of such measuring devices could not possibly be said to operate in the State of Idaho so as to form any analogy to the decisions in the Salton Sea cases. The same thing may be said of the requirement of the decree that the appellant shall keep a record of the measurements of water and furnish the same to appellees. With respect to the attempt of the court to saddle the lands of appellant with an easement in favor of appellees, or to give appellees a perpetual license to go upon and over the lands of appellant in Nevada at their pleasure, there is, we submit, no precedent. Of equal futility are those provisions of the decree whereby the court assumes to retain jurisdiction for the purpose of regulating the appellant's conduct in Nevada and for the purpose, if needs be, of appointing commissioners for the purpose of going into Nevada and of there distributing water to appellant. We are unable to conceive of any basis for the exercise of such a power. Suppose the court should appoint commissioners for the purposes named and that under the court's order such commissioners should proceed into the foreign state and there assume to act under the authority of such order, can it be contended that they would act otherwise than as trespassers? In this connection it should be borne in mind that the State of Nevada by statute has provided for an extensive and elaborate system of water distribution by officers

of its own creation. These officers are clothed with power to regulate head-gates, measuring devices and all other appliances deemed by them to be necessary or convenient in the diversion, distribution and use of water. Is it conceivable that this decree could bar the exercise of these sovereign powers by the State of Nevada?

One of the most onerous and vital provisions of the decree to be discussed under this head is the one that enjoins appellant from using the waters constituting its prior right upon lands other than those mentioned in the decree. Regardless of the question as to whether the court has jurisdiction with respect to this provision of the decree, its action in the premises is obviously erroneous. The question as to where the waters of the State of Nevada may be used is one that must be answered not by what a court in a foreign state may provide, but by what the legislature of the State of Nevada enacts. In the language of Mr. Justice Field in Pennoyer v. Neff, 95 U. S., at 722:

> "The several states of the Union are not, it is true, in every respect independent, many of the rights and powers which originally belonged to them being now vested in the government created by the Constitution. But, except as restrained and limited by that instrument, they possess and exercise the authority of independent States, and the principles of public law to which we have referred are applicable to them. One of these principles is, that every State possesses exclusive jurisdic-

tion and sovereignty over persons and property within its territory. As a consequence, every State has the power to determine for itself the civil *status* and capacities of its inhabitants; to prescribe the subjects upon which they may contract, the forms and solemnities with which their contracts shall be executed, the rights and obligations arising from them, and the mode in which their validity shall be determined and their obligations enforced; and also to regulate the manner and conditions upon which property situated within such territory, both personal and real, may be acquired, enjoyed, and transferred. The other principle of public law referred to follows from the one mentioned; that is, that no State can exercise direct jurisdiction and authority over persons or property without its territory. Story, Confl. Laws, c. 2; Wheat. Int. Law, pt. 2, c. 2. The several States are of equal dignity and authority, and the independence of one implies the exclusion of power from all others. And so it is laid down by jurists, as an elementary principle, that the laws of one State have no operation outside of its territory, except so far as is allowed by comity; and that no tribunal established by it can extend its process beyond that territory so as to subject either persons or property to its decisions. 'Any exertion of authority of this sort beyond this limit,' says Story, 'is a

mere nullity, and incapable of binding such persons or property in any other tribunals.' Story, Confl. Laws, sect. 539."

The State of Nevada through its legislature has at various times since its organization asserted ownership of all waters within the state and has provided methods not only for the appropriation of such waters, but also for the change of places of diversion, places of use and manner of use. In 1913 a complete codification of laws with reference to the appropriation and use of waters under state control was adopted by the legislature of Nevada. (Session Laws of Nevada for the year 1913, pp. 192-220.) Section 1 of the act provides:

"The water of all sources of water supply within the boundaries of the state, whether above or beneath the surface of the ground, belongs to the public."

Section 52 provides:

"There shall be appointed by the state board of irrigation one or more water commissioners for each water district, who shall receive a salary, including all expenses, of not more than five dollars ($5) per day for each day actually employed on the duties herein mentioned. Such water commissioner shall execute the laws prescribed in sections 53 to 58, inclusive, of this act, under the general direction of the state engineer. * * * "

Sections 53 to 58 provide:

"Sec. 53. The state engineer shall divide the

state into water districts to be so constituted as to insure the best protection for the water user, and the most economical supervision on the part of the state. Said water districts shall not be created until a necessity therefor shall arise and shall be created from time to time as the priorities and claims to the streams of the state shall be determined.

"Sec. 54. It shall be the duty of the state engineer to divide or cause to be divided the waters of the natural streams or other sources of supply in the state, among the several ditches and reservoirs taking water therefrom, according to the rights of each, respectively, in whole or in part, and to shut or fasten, or cause to be shut or fastened, the head-gates or ditches, and to regulate or cause to be regulated, the controlling works of reservoirs, as may be necessary to insure a proper distribution of the waters thereof. Such state engineer shall have authority to regulate the distribution of water among the various users under any partnership ditch or reservoir where rights have been adjudicated in accordance with existing decrees. Whenever, in pursuance of his duties, the water commissioner regulates a head-gate to a ditch or the controlling works of reservoirs, it shall be his duty to attach to such head-gate or controlling works a written notice properly dated and signed, setting forth the fact that such head-gate or con-

trolling works has been properly regulated and is wholly under his control, and such notice shall be a legal notice to all parties interested in the diversion and distribution of the water of such ditch or reservoir. It shall be the duty of the district attorney to appear for or in behalf of the state engineer or his duly authorized assistants in any case which may arise in the pursuance of the official duties of any such officer within the jurisdiction of said district attorney.

"Sec. 55. Any person who shall wilfully open, close, change or interfere with any lawfully established head-gate or water-box without authority, or who shall wilfully use water or conduct water into or through his ditch which has been lawfully denied him by the state engineer, his assistants or water commissioners, shall be deemed guilty of a misdemeanor.

"The possession or use of water when the same shall have been lawfully denied by the state engineer or other competent authority shall be *prima facie* evidence of the guilt of the person using it.

"Sec. 56. The owner or owners of any ditch or canal shall maintain to the satisfaction of the state engineer of the division in which the irrigation works are located, a substantial head-gate at or near the point where the water is diverted, which shall be of such construction that it can be locked and kept closed by the

water commissioner; and such owners shall construct and maintain, when required by the state engineer, suitable measuring devices at such points along such ditch as may be necessary for the purpose of assisting the water commissioner in determining the amount of water that is to be diverted into said ditch from the stream, or taken from it by the various users. Any and every owner or manager of a reservoir located across or upon the bed of a natural stream or of a reservoir which requires the use of a natural stream channel, shall be required to construct and maintain, when required by the state engineer, a measuring device of a plan to be approved by the state engineer, below such reservoir, and a measuring device above such reservoir, on each or every stream or source of supply discharging into such reservoir, for the purpose of assisting the state engineer or water commissioners in determining the amount of water to which appropriators are entitled and thereafter diverting it for such appropriators' use. When it may be necessary for the protection of other water users, the state engineer may require flumes to be installed along the line of any ditch. If any such owner or owners of irrigation works shall refuse or neglect to construct and put in such head-gates, flumes, or measuring devices after ten (10) days' notice, the state engineer may close such ditch, and

the same shall not be opened or any water diverted from the source of supply, under the penalties prescribed by law for the opening of head-gates lawfully closed until the requirements of the state engineer as to such headgate, flume, or measuring device have been complied with, and if any owner or manager of a reservoir located across the bed of a natural stream, or of a reservoir which requires the use of a natural stream channel, shall neglect or refuse to put in such measuring device after ten (10) days' notice by the state engineer, such state engineer may open the sluicegate or outlet of such reservoir and the same shall not be closed under the penalties of the law for changing or interfering with headgates, until the requirements of the state engineer as to such measuring devices are complied with.

"Sec. 57. The state engineer or his assistants shall have power to arrest any person violating any of the provisions of this act, and to turn them over to the sheriff, or other competent police officer within the county, and immediately on delivering any such person so arrested into the custody of the sheriff, it shall be the duty of said state engineer, or his assistant making such arrest, to immediately, in writing, and upon oath, make complaint before the justice of the peace against the person so arrested.

"Sec. 58. Any person violating any of the provisions of this act shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be fined in a sum not less than twenty-five dollars ($25), nor more than two hundred and fifty dollars ($250), together with the costs, or imprisoned in the county jail not exceeding six months, and not less than ten (10) days, or by both such fine and imprisonment."

In section 59 there are the following provisions:

"Any person desiring to appropriate any of the public waters, or to change the place of diversion, manner of use or place of use of water already appropriated, shall, before performing any work in connection with such appropriation, change in place of diversion, or change in manner of use or place of use, make an application to the state engineer for a permit to make the same. * * * Every application for permit to change the place of diversion, manner of use or place of use of water already appropriated, shall contain such information as may be necessary to a full understanding of the proposed change, as may be required by the state engineer. All applications for permit shall be accompanied or followed by such maps and drawings and such other data as may hereafter be prescribed by the state engineer, and such accompanying data shall be considered as part of the application."

In section 63 it is provided that:

"It shall be the duty of the state engineer to approve all applications made in proper form where all fees, as in this act provided, have been paid, which contemplate the application of water to beneficial use, and where the proposed use or change does not tend to impair the value of existing rights, or be otherwise detrimental to the public welfare."

The act contains 90 sections in all and constitutes the present law of Nevada, except as amended in certain minor particulars by the legislature of 1915. Thus the State of Nevada has in the first place conferred upon appellant the right to change the place of diversion, place of use, or manner of use of its waters within that state. The court, on the other hand, by its decree has absolutely foreclosed appellant from exercising this right. The conflict between the court's decree and the laws of Nevada in this and other particulars to which reference has been made, is palpable and direct, and either the one or the other must yield.

The decree prohibits the appellant from irrigating other lands even although such irrigation would not result in any increased consumption of water. Right alongside of the lands that were irrigated prior to 1907 there are areas better adapted for cultivation than are some of the lands upon which the court says the water may be used. Nevertheless the appellant may not change the place of use so as to bring these other lands under cultivation, even al-

though it might be no disadvantage to appellees, to do so. Indeed, it might well be that with the water that is required to flood certain of the meadow-lands upon which crops of comparatively small value are produced, a much larger area of lands with better soil and better conditions generally, might be brought under cultivation and caused to produce more valuable crops without the consumption of any more water.

The decree ignores the well recognized right of an owner of water to increase the effectiveness of its use. (Rodgers v. Pitt, 129 Fed. 932; I Wiel, Sec. 483.) The court has allowed appellant a much smaller quantity of water than has been used by it and its predecessors in interest in flooding the meadow-lands. It appears conclusively from the testimony, however, that this method is the only one that can be successfully employed for the irrigation of such crops as are produced on the bottom lands. Appellant, therefore, is in this situation: It can no longer irrigate the meadow-lands so as to produce ordinary crops of wild hay and pasturage, because of the insufficiency of the water awarded to it by the decree; it cannot resort to the alternative of using this smaller quantity of water upon the higher lands where the soil is better and where more valuable crops can be produced, because the decree perpetually enjoins appellants from doing this. It was in anticipation of the possibility of being confronted by this dilemma that prompted defendant on the trial to undertake to show that the evaporation and consequent loss of water resulting from the old methods

of irrigation would be much greater than from the use of a like quantity of water on lands under the High Line Canal.

But the court of its own motion (119-122) excluded evidence offered for that purpose. This ruling of the court is complained of in appellant's fifteenth assignment of error. (351-357.) It should be noted also that the court in its written decision (321) invited a further showing concerning the use of water under appellant's old rights upon lands under the High Line Canal, and yet when defendant requested permission to introduce further evidence concerning this matter, the request was denied. (264.) So that the court by its decree has not only deprived appellant of the greater portion of the water it is entitled to as a prior right, but by restricting appellant in the use of the residue to the lower lands along the channel, the value of that residue has been appreciably diminished. It is a matter of common knowledge that appellant would be able to produce crops of a much higher value if it were permitted, for instance, to use the water under its prior right for the irrigation of the alfalfa lands under the High Line Canal. As has already been pointed out, the court refused to recognize appellant's claim to a prior water right for the lands under the High Line Canal, and this, in connection with the provisions of the decree now under discussion, necessarily has the effect of completely wiping out appellant's investment in the purchase, clearing, tilling and planting of approximately 4,500 acres of land and

in the construction of over eight miles of canal, besides numerous and extensive laterals. It is precisely for the purpose of meeting the requirements of such a situation as this that the laws of Nevada with reference to the change of the place of use have been enacted. But it is suggested by the court in its written decision that if appellant should use the water awarded to it as a prior right for the purpose of irrigating the lands under the High Line Canal, such action would result in a somewhat greater net loss than if used upon the bottom lands adjacent to the channel. This conclusion, as we understand it, is based exclusively upon information derived from the Herrington Report. It is true that the author of the report states some conclusions tending to support the court's view, but a careful analysis of the investigations that were actually made by Mr. Herrington will disclose that the conclusions referred to are not supported by the facts. For instance, in Table No. 4 of the report it will be seen that the author reached the conclusion that there was a net loss during the period covered by the investigations (May 16 to September 20, 1914,) of 9,580 acre feet. In Table No. 3 there is an apparent showing that the total diversions under the High Line Canal amounted to 7,034 acre feet; that the total return was 500 acre feet, leaving a net loss under that canal of 6,534 acre feet. These tables, however, must be considered in the light of the facts connected with the various measurements tabulated. In the first place, it must be borne in mind that a substantial portion of the re-

turn water was not susceptible of measurement. The only return water that was susceptible of measurement was that which came into the channel in streams of sufficient size to be measured by means of a water meter. The quantity of all other visible return water throughout the entire distance from the Bird's Nest to the Bore's Nest on the San Jacinto Ranch, as well as on the Vineyard Ranch, was arrived at by the roughest kind of an estimate. An attempt was made to ascertain the total net loss by comparing the total flow of the stream above all points of diversion with that shown at the guaging station located below the irrigated lands. It is clear, however, that such measurements do not meet the requirements of the case because of the admitted fact that a substantial quantity of water passed the guaging station below the lands in the sub-flow of the stream and, therefore, was not taken into account. As was explained by Engineer Jenson (234-235) the guaging station below the lands is at a place where there is a bed of gravel approximately 150 feet wide and at least six feet deep. The sub-flow of the stream through this gravel is of course not measured. But where the channel is cut through lava rock below this point, all of the water comes to the surface and flows into the reservoir. To arrive at the result shown by the tables referred to, it is assumed that the return water from all of the ditches, with the exception of that from the High Line Canal, was actually measured or at least was estimated with approximate accuracy. The impossibility of such

result is apparent when it is considered that the water diverted through the several canals on each side of the channel returns in large and small streams and by underground seepage all the way from the upper end of the Vineyard Ranch to the Bore's Nest. Many of the streams and seeps are of course too small for measurement or even of estimation. At page 15 of the report the author says: "By return water is meant only that part of the water diverted which returned to the main stream on the surface of the ground." So that the 500 acre feet referred to as return water from the High Line Canal is only that part of the return water from that source that flowed back into the channel over the surface. Considering the contour of the surface of the lands under the High Line Canal and the character of the soil and sub-soil, it is evident that all but an insignificant portion of the return flow would be by seepage and percolation. We think there is no testimony in the record from which it can be logically inferred that there is proportionately any less return water from the lands under the High Line Canal than from the meadow-lands. On page 19 of the report it appears that the only measurement that was ever made of the surface return water from the High Line Canal was on July 13. Finally, on page 30, the author says: "The proportion of water leaving the grain fields that actually reached Salmon Falls Creek can only be surmised, although unquestionably a large part returned as seepage." Furthermore, the physical conditions as testified to by Mr. Jenson (201-203)

are such as to rebut any inference that any of the percolating waters in the lands under the High Line Canal could possibly fail to return to the channel. The surface soil is loose and under that is a layer of coarse gravel resting upon a comparatively impervious stratum that dips rapidly in the direction of the bottom lands. Water percolates through this material at the rate of about 145 feet per day. (203.) At the time Herrington made the measurement of the return flow (July 13), the underlying strata had not become thoroughly saturated. Indeed it could hardly be expected that this mass would become fully soaked with water before the end of that season. After the soil became once saturated the percolating water would thereafter flow back into the channel as a matter of course. It is not contended that the lands in question are located in a different drainage area, nor that there would be any loss resulting from the irrigation of the same, except such as would be caused by evaporation and consumed by plant growth.

Thus far we have not referred to the principle announced in the case of Kansas v. Colorado, 206 U. S. 117, where it is said:

> "Summing up our conclusions, we are of the opinion that the contention of Colorado of two streams cannot be sustained; that the appropriation of the waters of the Arkansas by Colorado, for purposes of irrigation, has diminished the flow of water into the State of Kansas; that the result of that appropriation

has been the reclamation of large areas in Colorado, transforming thousands of acres into fertile fields and rendering possible their occupation and cultivation when otherwise they would have continued barren and unoccupied; that while the influence of such diminution has been of perceptible injury to portions of the Arkansas Valley in Kansas, particularly those portions closest to the Colorado line, yet to the great body of the valley it has worked little, if any, detriment, and regarding the interests of both States and the right of each to receive benefit through irrigation and in any other manner from the waters of this stream, we are not satisfied that Kansas has made out a case entitling it to a decree. At the same time it is obvious that if the depletion of the waters of the river by Colorado continues to increase there will come a time when Kansas may justly say that there is no longer an equitable division of benefits and may rightfully call for relief against the action of Colorado, its corporations and citizens in appropriating the waters of the Arkansas for irrigation purposes."

The principle laid down by the court in the above quotation from the opinion is a recognition of the only principle that in the final analysis can be adopted as a solution of some of the problems that arise out of conflicting assertions of sovereign power by the states through which interstate waters flow.

The case at bar furnishes a striking example of such a conflict. It is admitted that Nevada furnishes practically all of the watershed for Salmon River and its tributaries. About the only benefit that the State of Nevada can derive from the use of these waters is that which will follow from the irrigation of the lands in question by the defendant. According to the records kept by plaintiffs for the years 1911 to 1914, inclusive, the average annual discharge into plaintiffs' reservoir has been 130,600 acre feet. (68.) The State of Nevada, through the defendant, lays claim to a little over 50,000 acre feet. This can be used by the defendant and again restored to the stream with comparatively little loss.

Respectfully submitted,

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